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ABSTRACT

This book describes a 2-year project, an aesthetically focused experimental kindergarten emphasizing instruction in perceptual skills to stimulate acute sensory awareness (which would theoretically help the children become more academically able), and use of the arts as an instructional vehicle. The open education model stresses classroom centers of interest designed to facilitate exploration of materials and development of concepts. Children are required to make their own choices and to respond to a wide variety of aesthetic experiences. Creativity development provides the central focus of the individualized curriculum. A description of the open environment of the classroom deals with space and furniture organization and types of instructional materials and play. Information on staffing, working with parents, the teaching approach, and the organization of the kindergarten day is included. A major portion of the book delineates the aesthetic dimension of the program and describes the major activities developed to emphasize this dimension. Specific stimulus components of the aesthetic dimension include language arts; visual arts; ceramics, finger painting, weaving and woodworking; creative dramatics; music; and utilization of the outside environment. Activity descriptions and evaluative test batteries are appended. (CM)

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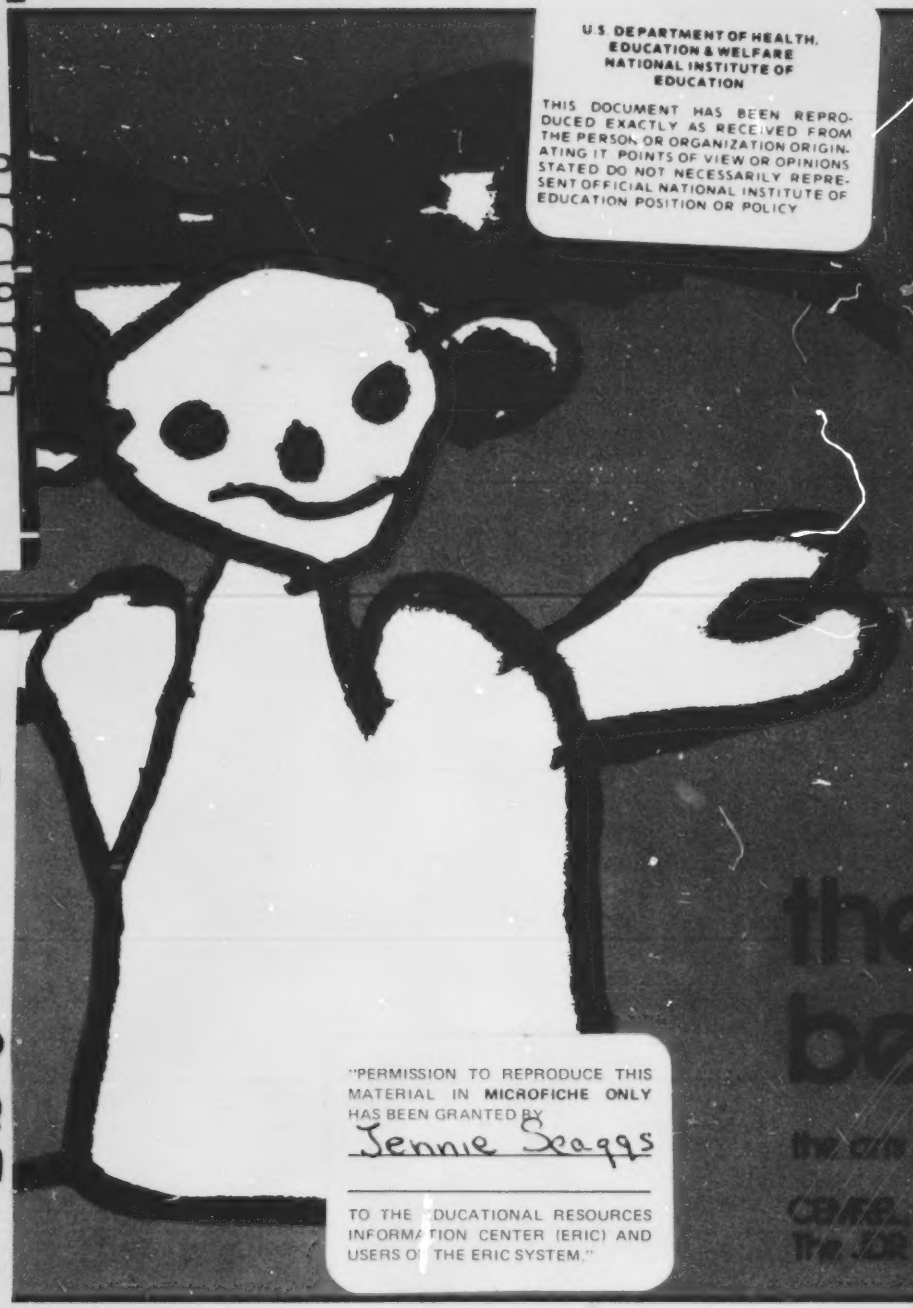

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the bee hive

the arts in early education

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the bee hive

the arts in early education

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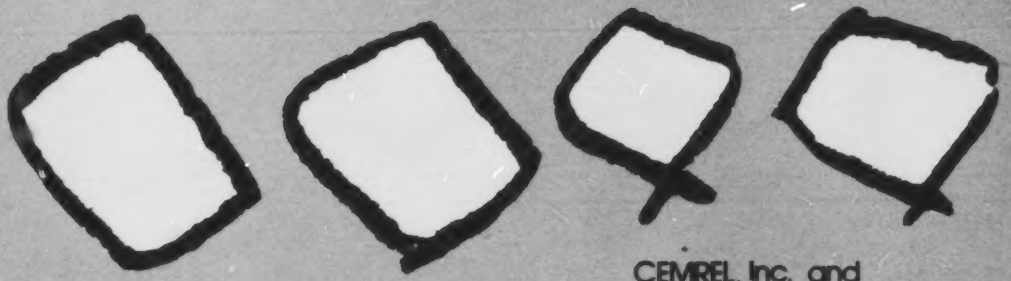

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The cover illustration and the illustrations that appear on the pages that begin each section of this book were done by Steven Gorman while he was a student at the Experimental Kindergarten.

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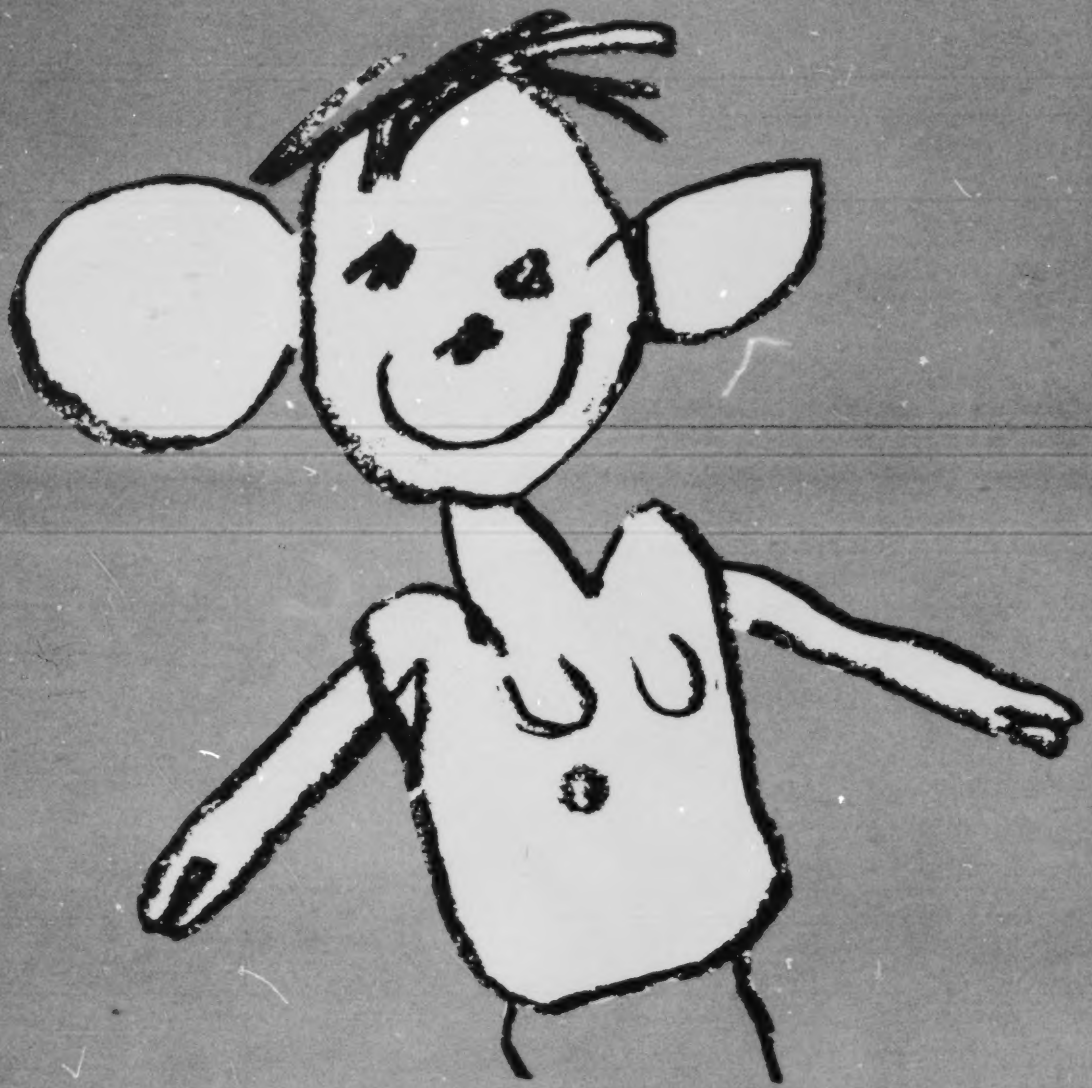
acknowledgments

Many people in the University City Schools and at CEMREL cooperated in establishing the Experimental Kindergarten. Special mention is due Judie Contrucci, Arts in General Education Project Drama Specialist, and Diane Davenport, Arts in General Education Project Music Specialist. They collaborated to develop and present many of the activities which became a part of the Kindergarten curriculum. Lois Elfanbaum, aide for the 1969-70 school year, and Bonnie Theisen, aide for the 1970-71 school year, each made an invaluable contribution to the implementation of the program. Donald Jack Davis and Harry Kelly of CEMREL were responsible for the design and implementation of the pilot study. The administrative staff of the University City Schools and the Office of the Superintendent, through Glenys Unruh, Curriculum Director, were helpful in making available a site in the school system. David Roach, Principal of Delmar-Harvard School, was most supportive of the program over the two-year period.

introduction



introduction

How can creativity be developed in children? Does their physical environment affect development of creativity? The psychological climate? Will a year of in-depth perceptual-skills instruction lead children to apply their skills to thinking and acting creatively? What activities can be planned for them and what materials offered to further their creativity?

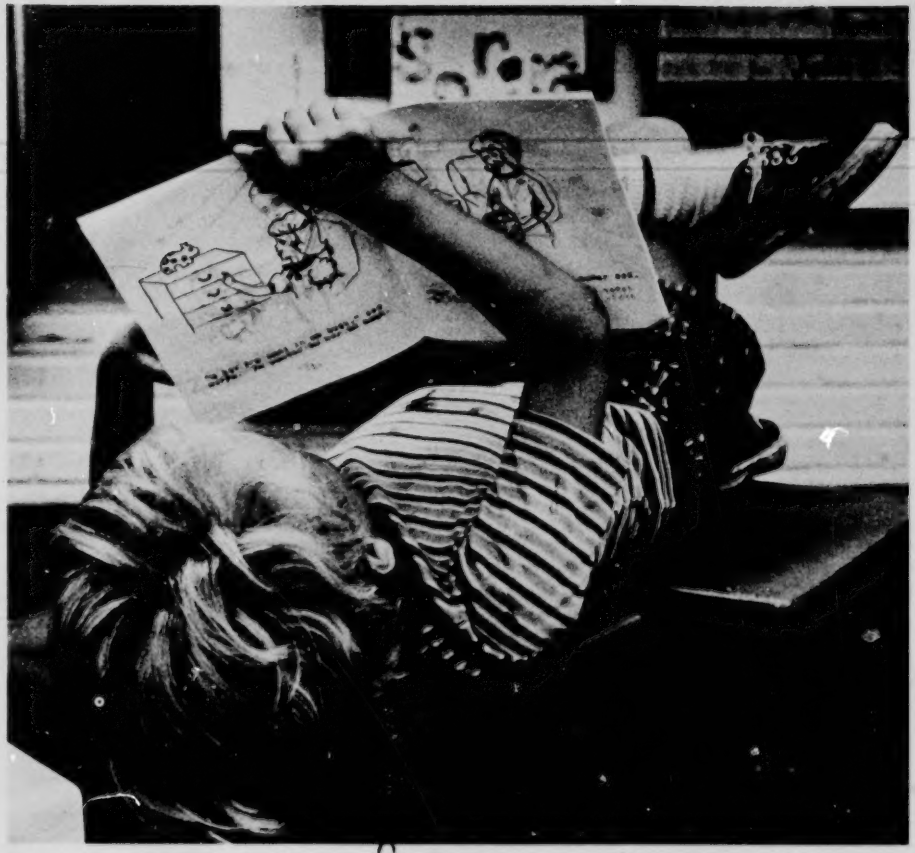
The Arts in General Education Project (AGE) of the JDR 3rd Fund and CEMREL cooperated to support a two-year project to investigate these questions. The project, an Experimental Kindergarten, was undertaken during the academic years 1969-70 and 1970-71.

One of the project's major premises was that the physical environment of the schoolroom itself does, indeed, have an effect on the learning of small children; the schoolroom may hinder or facilitate movement and creativity. The Experimental Kindergarten plan was influenced by the British Infant School model. This model stresses classroom centers of interest designed to facilitate exploration of materials and development of concepts. An important part of the Kindergarten's design was to create an environment which would present the children with tools for basic skills development and creative learning.

The psychological climate too would be designed to enhance creativity: the child would be involved in making choices; he would function as part and co-director of the learning experience. He would have ample opportunity to explore and experiment. Choice, exploration, and experimentation seem to take on the characteristics of play and are thus sometimes seen as unseemly for the schoolroom.

The British, however, have found that play is the work of young children, their mode of learning. Thus, the children, as much as is possible within the time limitations of the Kindergarten half-day, were to be encouraged to make choices in their use of time and also of materials. They were to be allowed periods of time undisturbed as they investigated the possibilities of a certain material or place, or they could move quickly from one activity to another. In line with this thinking, the teachers in the Kindergarten were to observe the children, talk to them about their activities, and ask questions designed to widen the scope of learning.

Within this physical environment and psychological climate, an attempt was to be made to introduce a wide variety of activities and materials in art, drama, movement, music, and language arts. These activities were to prepare the children to receive and respond to a wide variety of aesthetic experiences. Children would be encouraged to delve deeply into these arts areas both through formal development - skills instruction and through free experimentation during their whole year in the Kindergarten.



The Experimental Kindergarten was designed to build on the experiences children had already accrued through participation in the Early Education Center of the University City schools; thus, having experienced the EEC program was a prerequisite for children who wished to participate in the Experimental Kindergarten Project.

the early education center as a basis for the experimental kindergarten

The University City School District was aware that . . .

> Research findings . . . have highlighted the startling conclusion that the child's rate of development is relatively fixed by age six, the normal age for school entrance, and that there is not much hope for later modification if the child encounters only the "traditional" school environment. Early experience is seen to be of crucial importance in determining the rate and final level of development.[1]

Based on the assumption that intellectual capacity is *not* fixed, but capable of alteration through appropriate stimulation, it has been suggested that the real problem at hand is to find out how to govern the encounters of children with their environment in such a way as to foster both an optimal rate of intellectual development and a satisfying life. And it has been suggested that "this optimal rate of intellectual development incorporates self-directing interest and curiosity and genuine pleasure in such intellectual activity."[2]

With these assumptions as guidelines, the University City School District established the Early Education

Center (EEC) for four-year-olds in 1965. The center was developed under a grant from the U.S. Office of Education, and continues to operate. One of its objectives is to foster and increase intellectual development of the prekindergarten child *through a personalized program based on assessments of each child's developmental skills.*

The EEC identified three operations — reception, cognition, expression — which are necessary for intellectual development. These three operations are approached through the acquisition of five developmental skills — motor, auditory, visual, cognitive, language — from basic to high intellectual development. Children who are to attend the EEC are tested to measure their achievement in these five developmental skills areas. The diagnostic tests provide an indication of the relative strengths and weaknesses of each child in each of the five areas and show how far he has progressed in his development relative to others of his age.[3]

When the tests have been completed, a profile (see Appendix A) is developed for each child. By studying these profiles the EEC teacher can plan for each child a personal curriculum which will focus on those skill areas in which he did not come up to median level. A hierarchy is given to the development skills: gross motor skills are considered the most basic need, followed by auditory, visual, and cognitive. Cognition is the highest level of operation, and only a child who is strong in the other areas would concentrate on material related to the cognitive-retention process. Should a child show a deficiency in more than one area, he

could be given a major and a minor program. The time allocated to any given program would depend on its position in the hierachy of skills.

Once a child's difficulties have been diagnosed and recorded on a profile, activity inventory sheets (see Appendix A) are developed in each of his deficit areas. The inventory sheets become the child's own curriculum and a record of his performance. The EEC teacher consistently refers to the inventory sheets in planning activities for individual children. In this way the activities can be geared toward each child's deficit areas and the curriculum can be easily individualized.

The Experimental Kindergarten's intention was to extend the EEC model into the area of creativity or creative problem solving. Two instruments were added to the testing battery to establish a basis for measuring growth in this area.[4]

To the planners of the Experimental Kindergarten, the model established by the EEC appeared philosophically to be very supportive of what is believed to be the artistic process: the reception operation is like the first step in the artistic process — awareness and sensitivity — while the cognitive operation is analogous to the aesthetic decision-making process. The expressive operation correlates with the third and final stage of the artistic process—creative expression. Therefore, the model seemed a logical framework for moving into a study of the possibilities of aesthetically-directed education for kindergarten children. Based on the premises above, the Experimental Kindergarten program has two interlocking curricular objectives: 1) instruction in

perceptual skills to stimulate acute sensory awareness which in turn would help the children become academically more able, and 2) use of the arts as an instructional vehicle, thereby establishing an aesthetic dimension within the program.

The Kindergarten curriculum was planned on the basis of needs of individual children as indicated by their test batteries. Using the assessment profile, the coordinator placed each child in one or more learning groups — visual instruction, auditory instruction, visual-motor instruction, gross motor instruction, or language instruction. Specific tasks were assigned for each group. Basic materials and activities were taken from the *Developmental Skills Booklets* developed by the EEC staff. Additional materials included the Easel Listening Games by Mary Mervin (auditory), Gettman-Kane Program (visual-motor), the *Primer of Motor Development* by Edith O'Connor (gross motor skills), the Frostig Developmental Program in Visual Perception, Continental Press materials, the *Greater Cleveland Reading Program*, and locally manufactured materials for the visual group. *Opta*, a part of DETECT, was also used for visual memory. These materials helped to make the carrying out of the curriculum, with all its individualization, possible.

Learning activities developed in the Early Education Center to facilitate children's development in areas of weakness were extended into the Kindergarten program. Appendix A explores these activities in connection with sample profiles and activities inventory charts used to record progress in particular skills areas.

creativity development focal process of the experimental kindergarten

The designers of the Experimental Kindergarten posed questions which became central to the planning and development of the program. Those questions with some thoughts on possible answers follow.

1 Could the EEC model for perceptual development be extended into the Kindergarten with the addition of creative problem solving based on materials from the arts disciplines?

Such a program requires that an environment be created to both foster perceptual learning and to contribute to the overall creative problem-solving ability of the students in the program. It was thought that a very rigid perceptual-type instruction, built on motor, visual, auditory, and language skills, might stifle creative roles. Therefore, a core of activities and processes residing mainly in the arts would be introduced to foster creative aptitudes. The planners of the program recognized that the arts are not the only vehicle for stimulating the problem-solving process; the arts, however, do offer an excellent channel for beginning development of this process. During the course of the Kindergarten program, the methodology used in some of the arts activities was transferred to science and social studies activities so that the child was involved not only in skill development in perception, but also in the discovery that creative problem-solving in all areas was appropriate.

2 Can a series of activities from the arts disciplines be developed for visual, auditory, motor, and language instruction?

Because the arts are very broadly based in terms of activities and human experience, it was thought that they could be used to introduce an important series of activities which would contribute measurably to the development of visual, auditory, and motor instruction. At the same time, these activities would have an aesthetic content which would enhance and enrich the total curriculum of the Experimental Kindergarten. The attempt was to utilize the arts, not only as activities that produced an object such as a painting or a piece of sculpture, but also in the context of developing visual, auditory, motor, and language abilities.

3 Related to questions 1 and 2 above, could a series of arts activities be introduced into the already crowded half-day traditionally allotted to a kindergarten without hindering the students' development of skills which prepare them for their entry into a more formal first grade situation?

Many teachers speculated that adding a large arts component to a program of this type would result in insufficient time for developing reading and math skills, with the result that the children would be enjoying the activities but not learning math and reading. The validity of this speculation was a problem to be investigated as part of the project.

4 Could a continued concentration of developmental-skills instruction at the Kindergarten prepare the students in pre-reading and mathematics skills for first grade? Would these students be more successful because of their previous (EEC) and continuing (Experimental Kindergarten) developmental-skills instruction than those students who started a regular kindergarten program in the same years without these advantages?

There is much evidence to demonstrate that early education seems to accelerate the basic reading and mathematic skills of students in their early years. However, the leveling process appears to operate sometime during the first to second grade. Perhaps this happens because while early education programs give students an opportunity to develop more quickly in basic skills at the earlier age levels, upon entry into the first grade, accelerated children are locked into a standard program and, in the process, must fall in line with the other students. Thus, the formerly advanced children now actually rest on a plateau because of group pressures and the inability of the teacher to deal with individual differences in the classroom. This is only speculation; it may or may not be the case. To test this hypothesis it would be necessary to control the students' activities, not only in the pre-school program, but continuously at least until the third grade. Differences in performance could then be explored.

The Experimental Kindergarten did not, unfortunately, have the opportunity to trace the students more than one year, their kindergarten year. However, it seems appropriate that other studies should attempt to investigate the leveling phenomenon noted above, since this phenomenon is significant for justifying the existence of early education programs.

In summary, the design and the expected outcomes of the Experimental Kindergarten Project were the following:

1 To extend the Early Education Center (EEC) to include the creativity factor in the student profile and to design activities centered in the arts which would foster the development of creative problem solving.

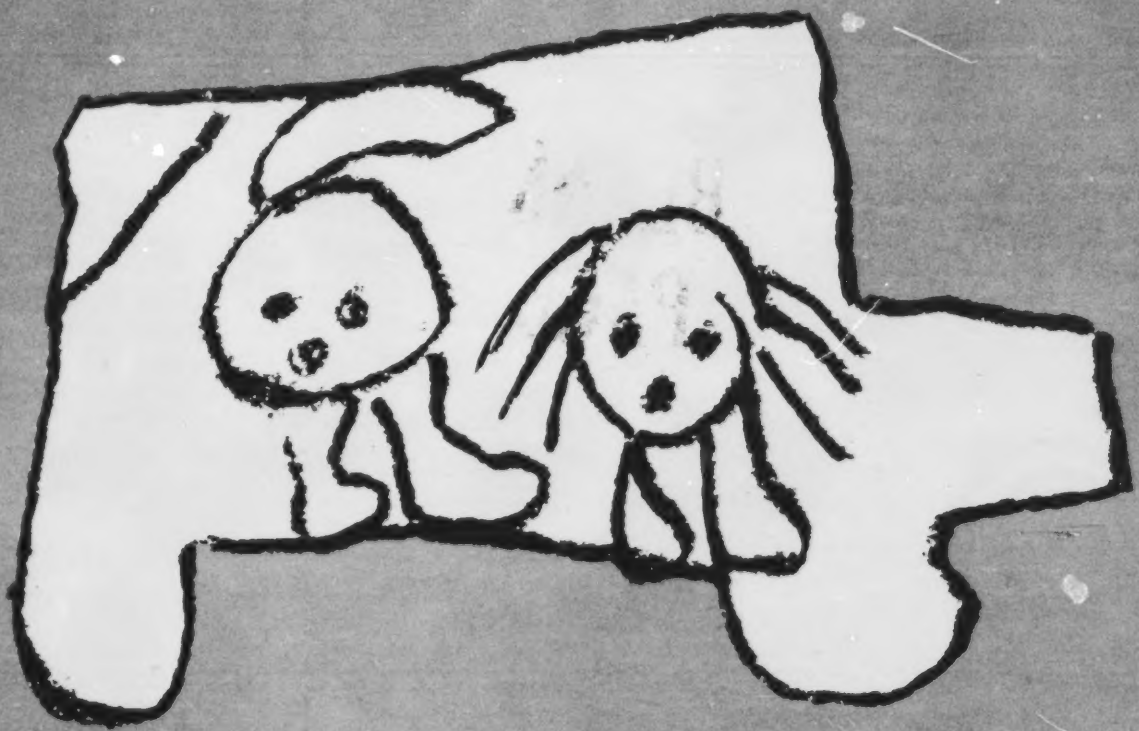
2 To design arts activities which would help to develop both in-depth perception and aesthetic learning.

3 To design a learning environment conducive to general perceptual learning, aesthetic education, and a positive attitude toward learning.

4 To introduce the student to a learning situation where he would share the responsibility for instruction and would need to maintain a working relationship with his peers in order to participate in the classroom activities, i.e. an open classroom.

5 Within the context of this learning environment, to satisfy basic skill requirements for entry into the first grade.

an
open
environment



an open environment

The Experimental Kindergarten was housed at the Delmar-Harvard School, University City, Missouri. Program expenses were shared by the Arts in General Education Program and by the Aesthetic Education Program of CEMREL.

Delmar-Harvard School is adjacent to the business district of University City and next door to the building which houses both the administrative offices of the school system and the Arts in General Education Project. The building was constructed in 1915 and has one level beneath ground and two stories above ground. The school serves approximately 450 children, of whom one-third are black.

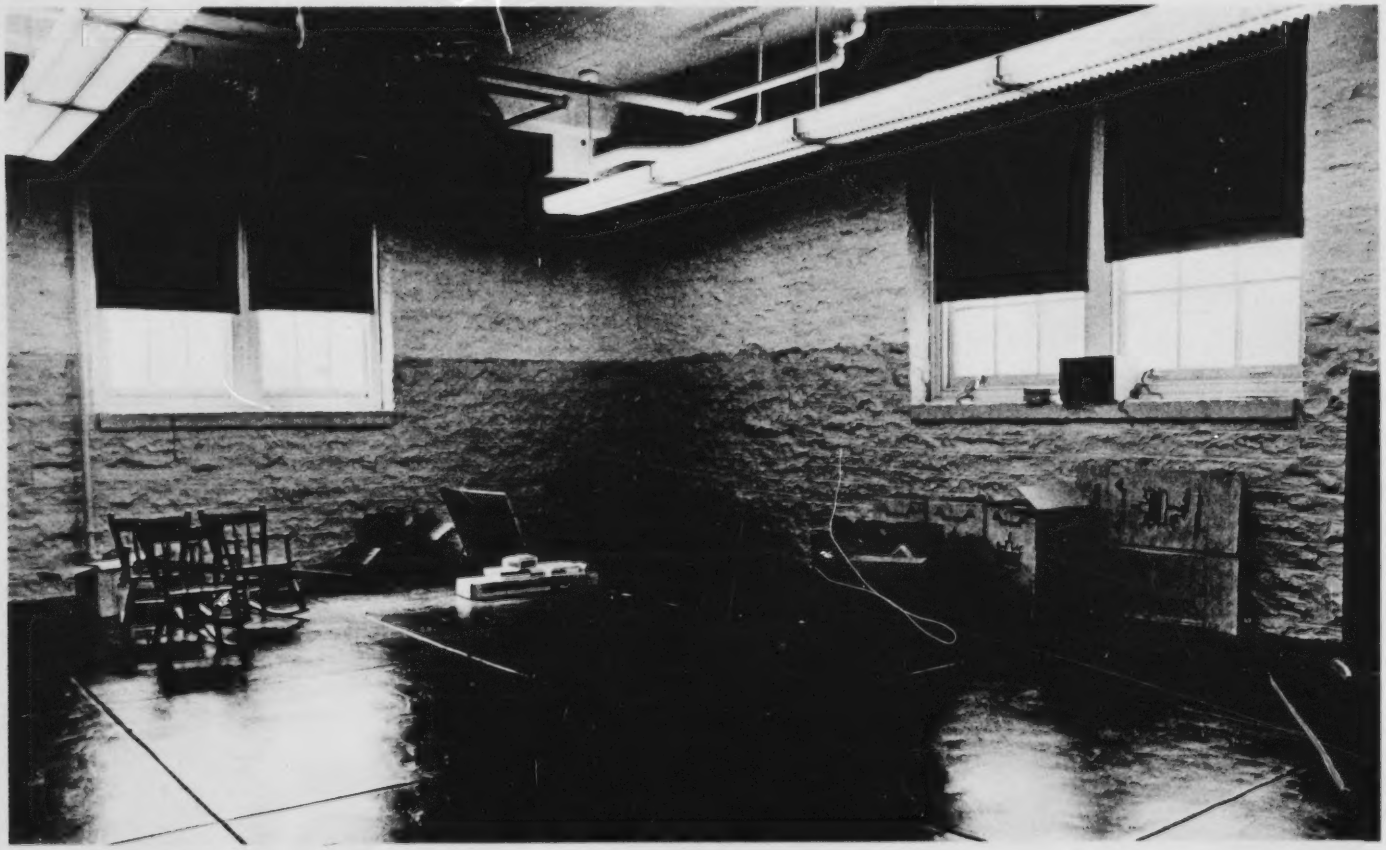
Plans were made to move into a room of 756 square feet in the northwest corner of the basement. The space was inadequate and the room cramped for a class of 25. An article by the American Association of Elementary-Kindergarten-Nursery Educators (EKNE) in *Today's Education*[5] suggests that 50 square feet of indoor space per child be provided for nursery school and kindergarten. So the space was really adequate for a class of 15 children only.

There are no other classrooms on the floor which housed the Experimental Kindergarten, but there are general-use and service areas — the gymnasium, the boiler room, lavatories, and the storage room for art supplies. A small space in the hall was set aside as a coatroom for the Kindergarten.

Before the basement space was assigned to the Kindergarten, it had served the Delmar-Harvard children as a projection room. It was, therefore, completely bare of all permanent furnishings. The Experimental Kindergarten had the task of converting this room to a workable, cheerful, and comfortable classroom for 25 children and the adult staff.

Major alterations to the room included installation of a child-level cabinet sink with open storage beneath and storage units above. A one-way viewing window was installed in the door. The concrete floor was covered with indoor-outdoor carpeting, chosen for economy since the program was to last only two years, and a vacuum cleaner was purchased. The green walls were painted white; two electrical outlets were added; a doorway which led to a lavatory was blocked off; and display space was made over the door. Two fluorescent ceiling light panels replaced bare incandescent bulbs. A Learning Wall was designed and built (see structure of Learning Wall, page 23).

With the exception of laying the carpet, all of these alterations were accomplished by the regular maintenance crew of the school system (see Appendix B for breakdown of costs). The maintenance crew of Delmar-Harvard School was responsible for



the day-to-day upkeep of the room, and the program assumed the responsibility for cleaning the carpet during the summer. (See Floor Plan of Experimental Kindergarten Room, page 25).

The major criterion for non-permanent fixtures was flexibility. The room had only three kinds of non-permanent fixtures: shelves constructed of cinder blocks and 5' x 1' boards painted white; 4 tables constructed from doors and mounted on 17" pedestals finished in natural varnish; and 30 Educubes in brilliant colors.

For the purpose of economy, the shelves were constructed from these cinder blocks and boards but they had two major drawbacks: the supporting blocks themselves took up eight inches of shelf space, and, once constructed, the shelves could not be conveniently shifted from one place in the room to another. The relative permanency of the shelves was particularly regrettable. While the children were included in initial planning of the use of space in the room, it was also hoped they could help rearrange all the furnishings as their needs changed, as the components of the program's curriculum demanded more open or more divided spaces, or as the weather required more indoor activities. The parts of the shelves were heavy, and their dismantling and reassembly a time-consuming process; so the notion of moving them frequently was discarded. On the other hand, the shelving proved sturdy and attractive. Other programs on limited budgets could make use of these extremely inexpensive storage-display units.

The idea of open shelving is inherent to the philosophy of the program; it is

felt that all materials in the room should be available for all persons in the room to use, and all are responsible for them. There was no teacher's desk in the room. One set of open shelves was designated for all supplies which normally would be found at the teacher's desk — staplers, scratch pads, attendance records, magic markers, pens and pencils, rulers, hole punches, paper clips, rubber bands, scotch tape dispensers, calendar, and stamp pads. A great quantity of material was consumed during the two years, but nothing was lost, stolen, or broken.

In addition to serving as work surfaces, the room's four tables served several other purposes: separated or pushed together, they formed a platform low enough for the child to step up on with ease and to jump off of safely; turned on their sides, they became hiding spaces, cubbyholes, and mazes; and squatting behind one, a child, or two or three children, could operate puppets over the long edge. The solid pedestal on each end provided the children with a screen, giving them a feeling of security and hiding them from any audience. When using the table as a work surface, the children could sit on Educubes or kneel on the carpet — the tables accommodated either position comfortably.

The Educubes were the only seating unit in the experimemental Kindergarten (see page 17). When not in use, they were stored beneath or on top of the tables. Each table accommodated eight of the modules. Although designed as a seating and building unit, they were used as an integral part of the curriculum, particularly in dramatic play of all kinds. A child could "sleep" curled up in two

Educubes, could make a house of six or eight, a train of two or twenty-two — the options were limitless. Two modules formed an individual "desk" and chair, which were extremely appealing to the child. A bigger desk was formed by two Educubes side by side.

The Educubes' surfaces were ideal for soapsuds painting or finger painting; washing them with sponges and soapsuds was considered *the* most desirable job on the list of daily maintenance chores performed by children.

Educubes were used to develop gross motor skills in building activities and also as a counting tool for practice in arithmetic operations and elementary measurement. Instructions and questions such as the following were given to the children:

1 Put all the blue Educubes in a line. How many do you have? Put all the yellow Educubes in a line. Do you have more blues than yellows? Less? The same? How many yellows must you add (or take away) so that the blues and yellows will be the same number?

2 Make a stack of Educubes as high as my head. How many did it take? Make a stack as high as your head. How many did that stack take? (*Or* How many less did you use in the second stack than in the first?)

3 How many Educubes does it take to cover the top of one of the tables? To cover the top of the stage in the auditorium? To cover the reading corner? How many more did you use in the auditorium than in the reading corner?

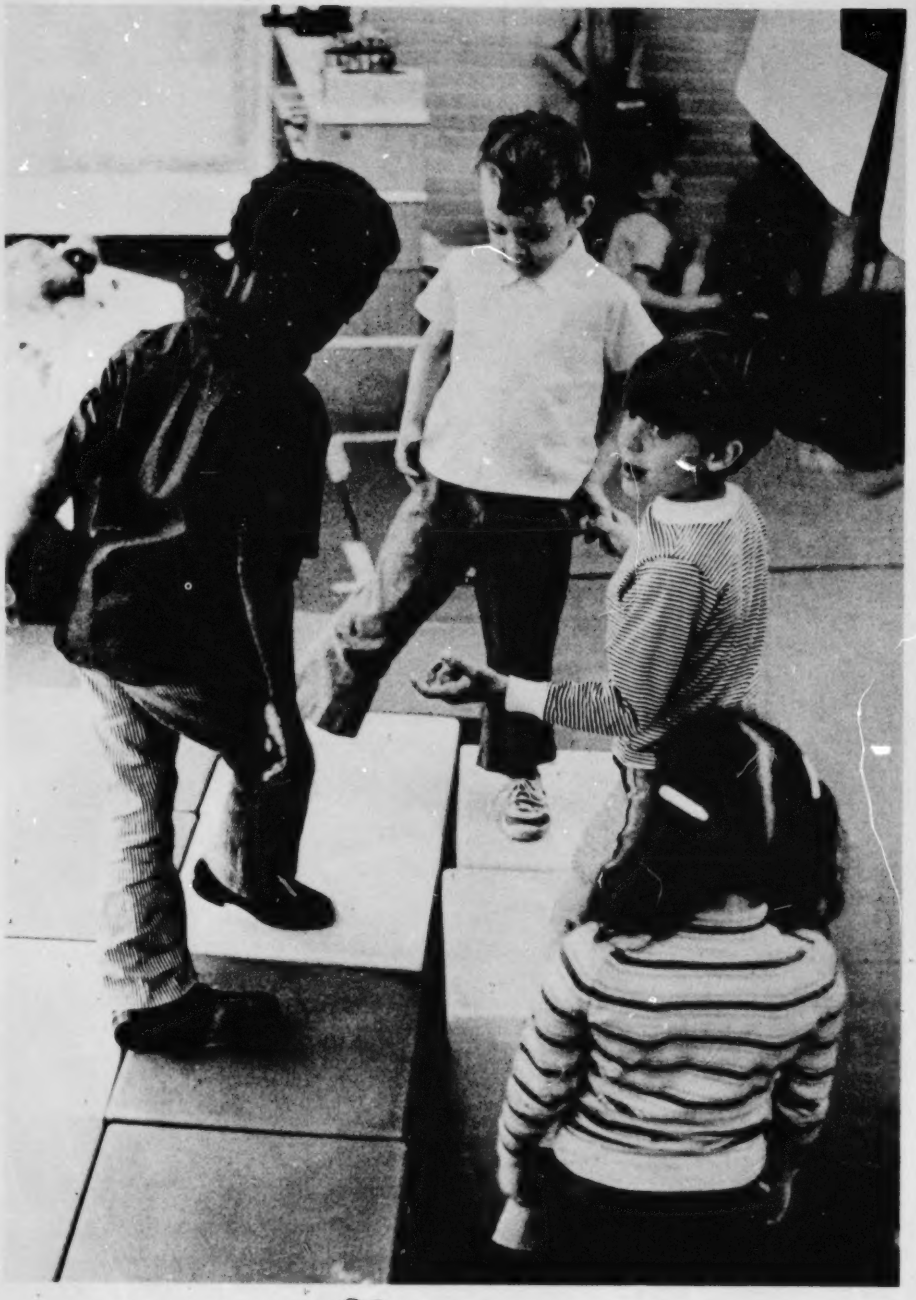
4 How many will it take to cover two of our tables? Try it and find out if you are right.

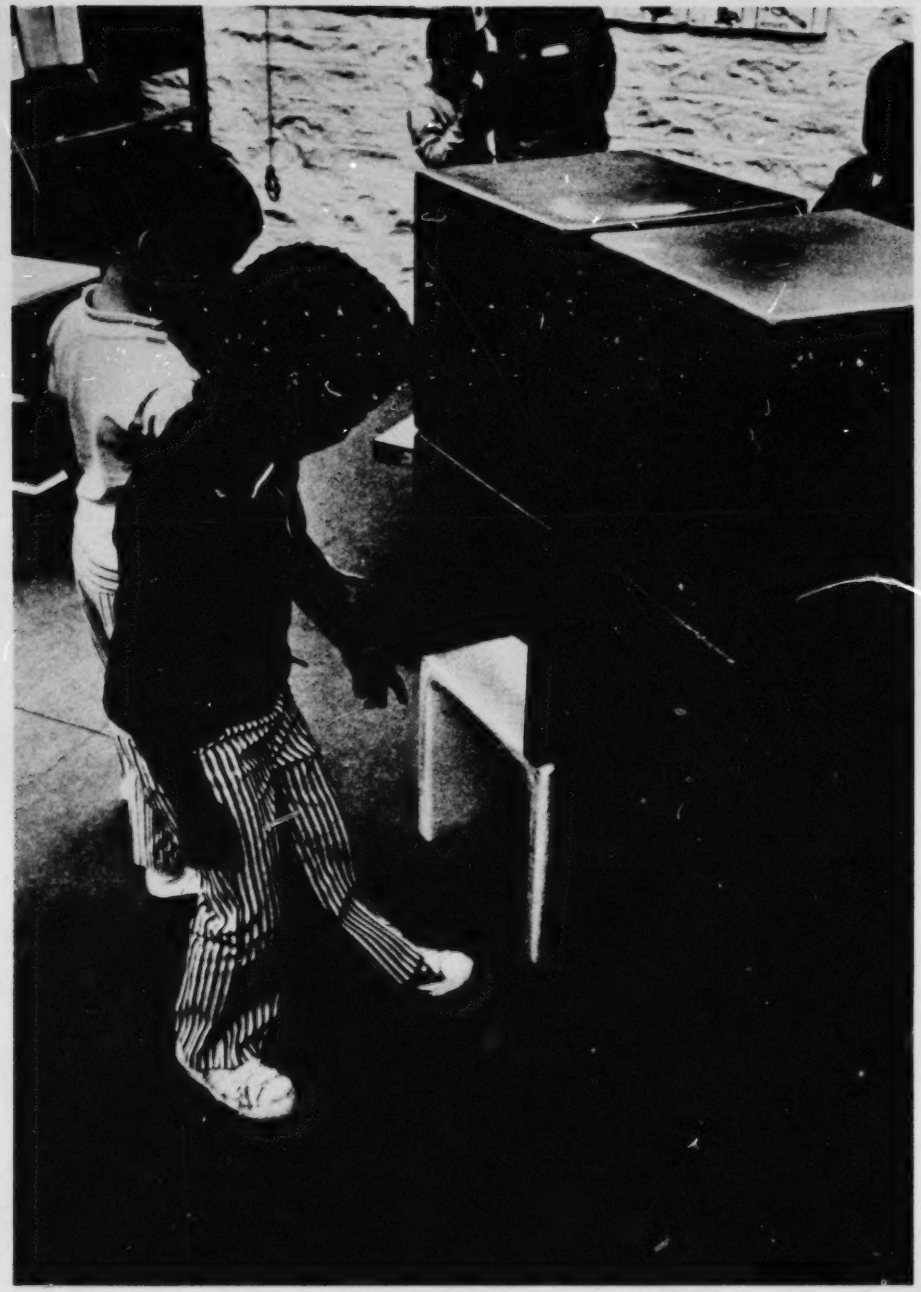
For width and length measurement: Make a bed of Educubes that is six Educubes long and three Educubes wide.

Educubes also proved useful in reinforcing color discrimination (all the boys in striped shirts would be directed to sit on green Educubes one day). To help children remember "left" and "right," they were asked to make a large stage of the modules and walk on the top, always putting the left foot on one color Educube and the right foot on another color.

Because the modules have some sides alike and some different, they were used to form many two-dimensional and three-dimensional patterns. The children became aware of repetition and variation in pattern. There were five colors of Educubes, and this element was added to the consideration of pattern.

The Learning Wall (see pages 22 and 23) was designed expressly for the Experimental Kindergarten. The objective was to provide an attractive display area for two kinds of materials: commercial materials that coordinated with the subject matter being studied, and the children's own artistic endeavors. A requirement for the design of this area was that the children themselves be able to handle the display panels, removing them from the Learning Wall, attaching the graphic material they wished to display, and returning the panel to the Wall. Another requirement was that the background surface, when divested of all of its component panels, be suitable for hanging a mural.





The Learning Wall was 24 feet long and 4 feet high. It was made of half-inch plywood with five horizontal dado grooves 10 inches apart. This surface was painted white. Movable panels of half-inch plywood, cut in various sizes, had a horizontal aluminum strip set in the back at a 45-degree angle. In order to place a panel on the background surface of the Learning Wall, the children simply held it against the background, pushed it up slightly higher than the dado groove, and allowed the aluminum strip to slip into the groove. To remove any panel they reversed the process, pushing the panel up from the dado groove.

The children could thus interact with their physical environment, making aesthetic judgments as to what materials should go on the display and making arrangements of the materials in ways that they found pleasing.

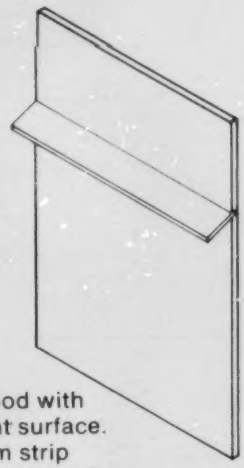
Frequent rearrangement was encouraged. Handling the materials in this way opened a whole new avenue of involvement between children and display materials.

During the first year of the Experimental Kindergarten, the children were also able to be intimately involved in the physical arrangement of the space they would be working in during that school year. The room fixtures could not be completed by the time the school year began, and so the Experimental Kindergarten began in temporary quarters elsewhere in the building. As each step in the alteration of the room was completed and as boxes of equipment arrived, the children and the adults visited the room. The children's observations were noted and arrangements discussed—"Where would you

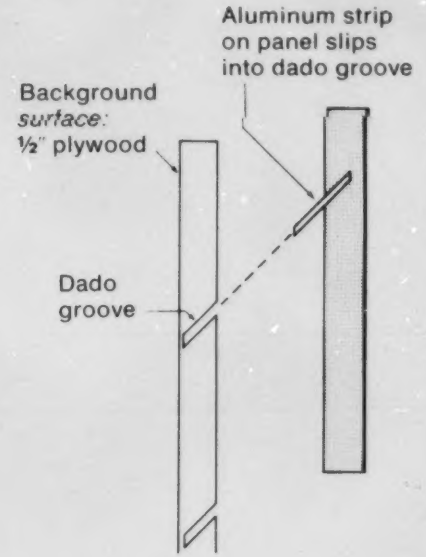
put the games? The piano? Musical instruments? Where would you read? Rest? Build? Listen to records?" Some of the children's plans and comments concerning their experiences this first year are on page 24. From a compilation of these observations and from watching the children move in the space, the placement of the shelving units and the tables was decided.

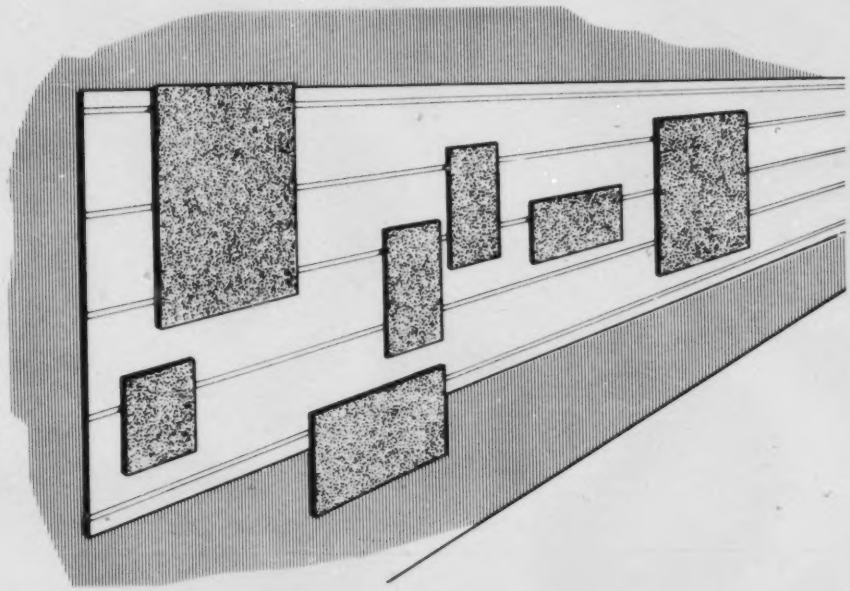
Because of the difficulty in moving the shelving units, the space was arranged in virtually the same way throughout the two years, except that tables were moved as changes in use of space dictated. The piano was kept outside the door and brought in when needed. This allowed the piano space to be actively utilized all the time.

structure of learning wall



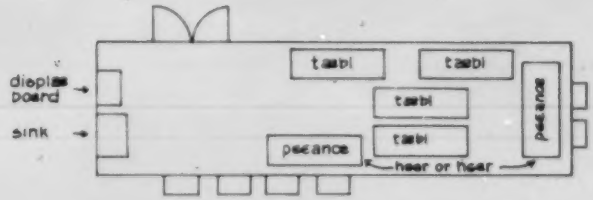
Panel:
½" plywood with
cork front surface.
aluminum strip
glued in groove at a
45° angle





children's plan for experimental kindergarten room

september 23, 1969



hou wee want our rœm

tœdæ wee sau our nœ rœm.
beth sau a sink with nœ handl.
evan sau the sink had nœ piep yet.
lisa sau green carpeting.
sarah sau lots ov baullz.
laura sau a stœn waul in our nœ rœm and aullsœ somthing tœ hæng picturers on.
brenda sau reel truks.
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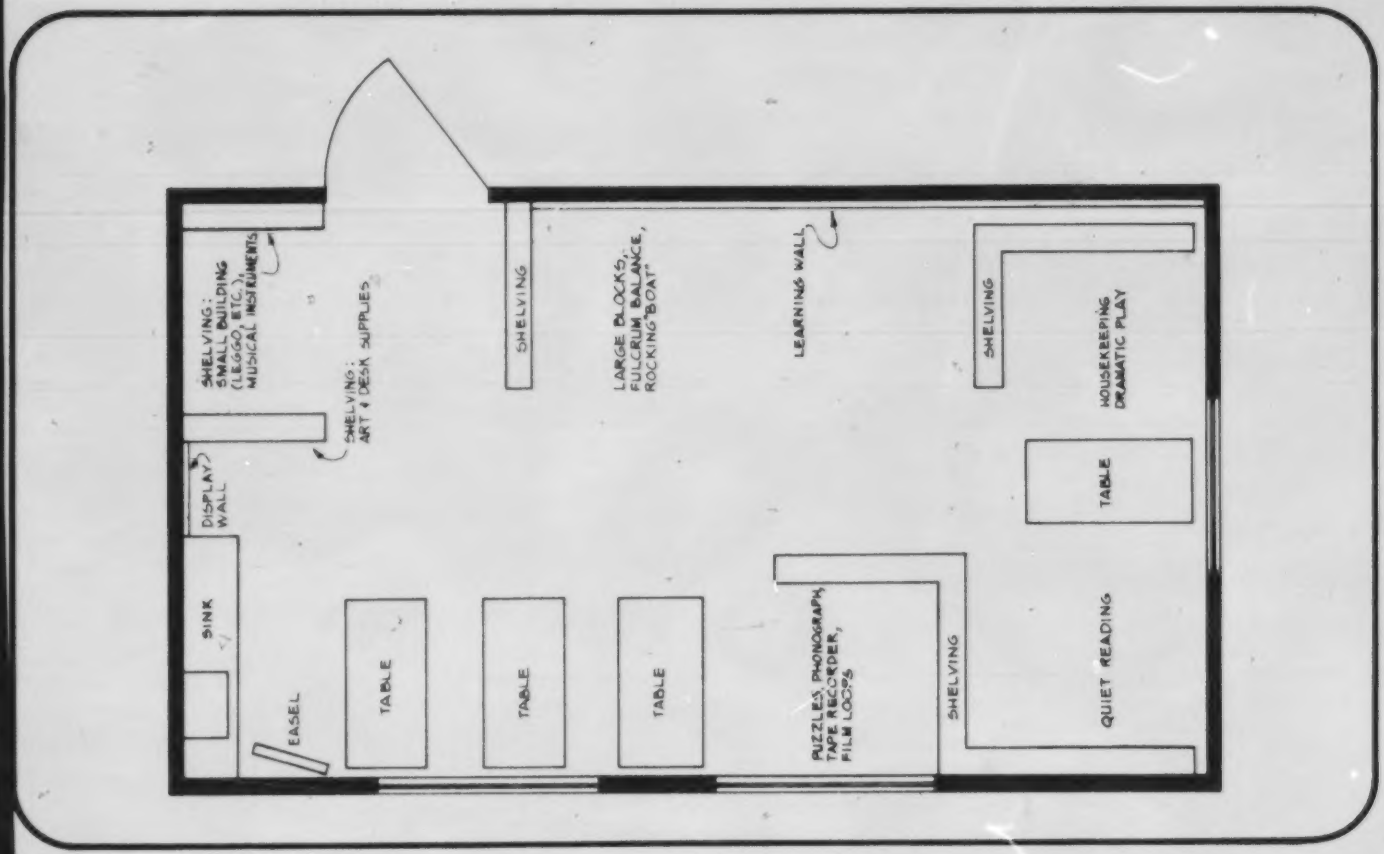
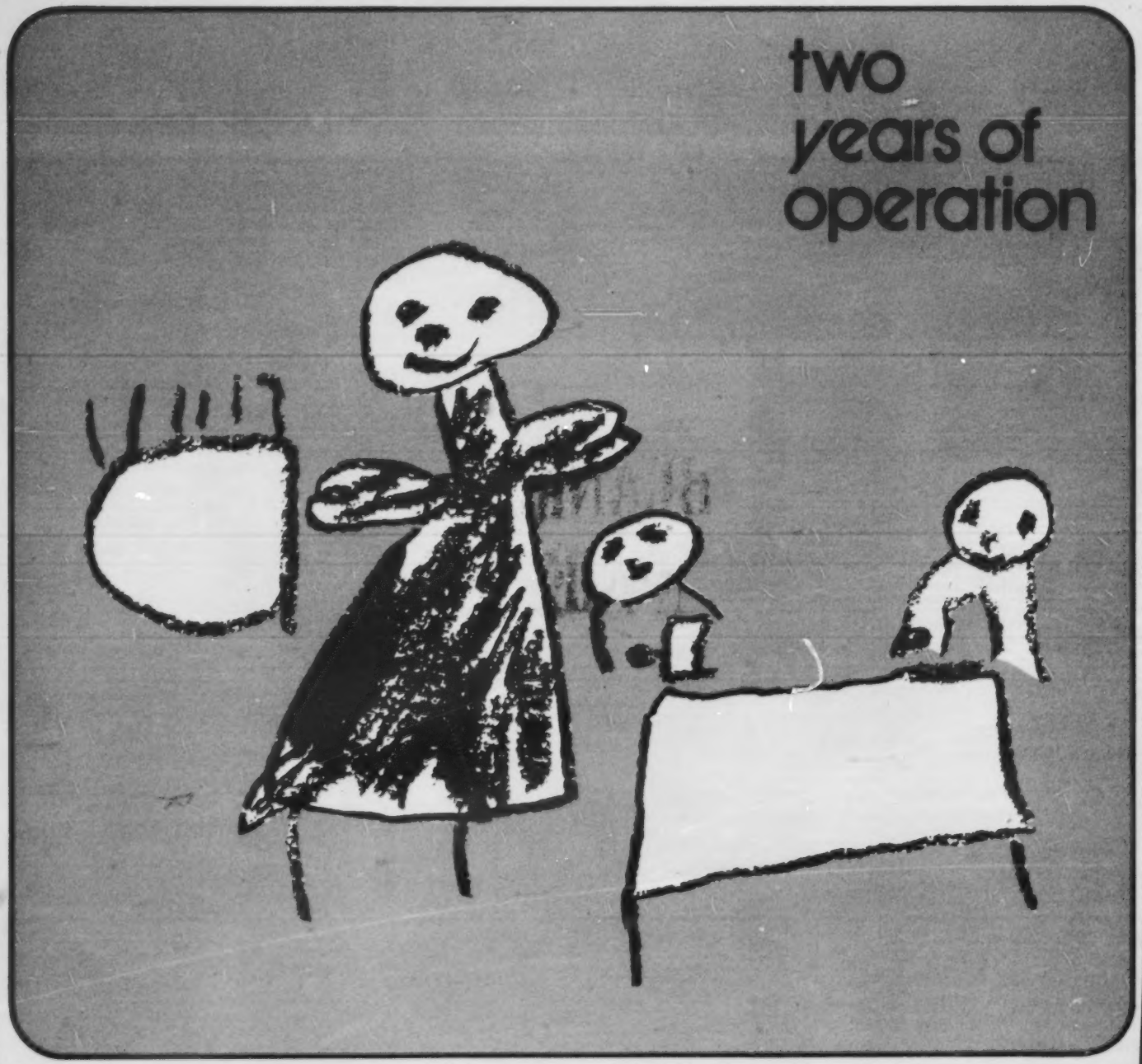
floor plan of kindergarten room




two
years of
operation

two years of operation

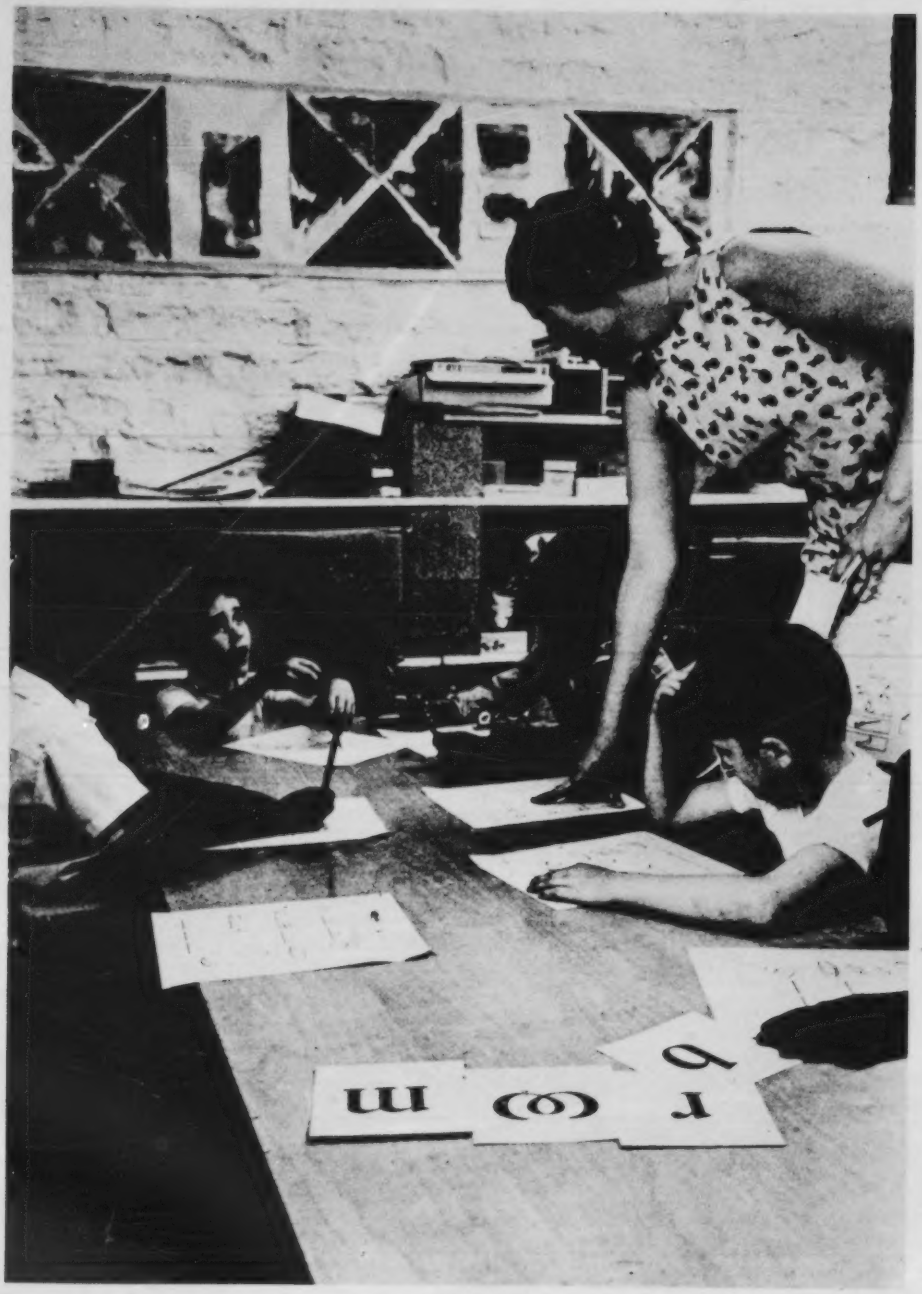
The Experimental Kindergarten operated for two school years, 1969-1970 and 1970-1971 under the joint sponsorship of CEMREL and the Arts in General Education Project in the University City, Missouri, Public Schools. The AGE Project is supported by the JDR 3rd Fund, Inc. The Kindergarten was founded in 1969 and plans were made to enroll 25 children for the first year. The intention was to base selection on participation and performance at the EEC, performance on the pre-test battery, and on pre-kindergarten teacher's judgments. In reality, the program was able, each year, to accommodate all students from the EEC who wish to attend.

Of the 25 children who made up the first year's class, 19 were white, 5 were black, and 1 was South American. Twelve were boys and 13 were girls. The second year, 19 children wished to attend the program and all were accepted. Fifteen were white and 4 were black. Fifteen were boys and 4 were girls. One white boy moved away during the year. The economic background of the children's families could be considered middle and upper middle class.

staffing

The Kindergarten was coordinated by Nancy Richard, a kindergarten teacher with five years' experience, three of which were as a teacher at the Early Education Center of the University City Schools. The need for a teacher's aide to assist the coordinator was recognized, and qualifications were defined before the opening of the project. The aide would be expected to function as a teaching companion to the coordinator, handling group lessons and assisting with classroom organization. Requirements were that she be in good health, exhibit an ability to follow directions, speak clearly with a well-modulated voice, and have a rapport with and understanding of young children. There was no necessity for her to hold a degree of any kind. The first year, the mother of a child who had been at the EEC three years earlier was selected. The second year, the mother selected had assisted with a Title I program. Both were hired through regular channels of the University City Public Schools' personnel office. Both were familiar with the rationale of the program and many of the activities which had been developed for it. There was no time for a training session with the Experimental Kindergarten coordinator the first year, but arrangements were made for the aide to attend the training sessions given annually for the EEC aide staff. The second-year aide had ample time to train with the coordinator before the 1970-71 year began.

The full-time aide added flexibility to the Experimental Kindergarten. While the job of planning the curriculum remained fully in the hands of the



coordinator, the aide shared responsibility for the implementation of the program with the coordinator. Developmental skills had to be integrated into every Kindergarten day. During this period, the aide either carried out the developmental skills lesson or supervised the part of the group which was not involved in the lesson so that the coordinator could work without interruption. With reading readiness and math groups, the coordinator handled one group while the aide handled the other. Thus, all of the children were busy in one of two groups during this time.

In addition to these formal group duties, the coordinator designed many individual learning tasks that were carried out by the aide. These tasks ranged from such things as teaching a child to write his name, to presenting a variation on a past math lesson to a child who was either inattentive, absent, or simply needed more reinforcement of a certain concept.

working with parents

A high priority was placed on family involvement with Kindergarten curriculum activities. The home environment has been called "the hidden curriculum," and it was felt that the more involvement there was from home, the stronger the Kindergarten program would be.

Many ways of working with parents were used — group meetings; personal conferences; telephone conferences; frequent letters from the coordinator; mothers coming in to assist with lessons, parties, and trips. But most important by far was the Kindergarten's open-door policy.

Early each fall, Delmar-Harvard School had an evening PTA meeting. A period of time was set aside for parents to meet the teachers and visit the classrooms. For all fathers and most mothers of Experimental Kindergarten children, this was the first opportunity to see the room. Both years 90 percent of the parents attended this meeting. This high attendance can probably be accounted for in some measure by the eagerness of parents to see the physical facility. At this meeting, the coordinator displayed those curriculum materials which would be used with the children in perceptual skills instruction and added labels inviting parents to try out these materials. Written instructions were provided where necessary. A small showing of art work by each child completed the display. Many favorable comments were expressed, and the children who accompanied their parents were able to demonstrate their knowledge of the materials displayed.

At this meeting, parents were asked to state their preference for a future meeting. This second meeting took place at the end of October and was the only other large meeting called during the year. At that time, the curriculum for the year, trips and their procedure and purpose, and grouping and its purpose were all explained. Also, the coordinator emphasized that parents were welcome to visit at any time and suggested that, on the day a parent drove a car pool, he might come into the room and stay awhile or that he might arrive early for pickup and come in to visit at the end of the day. In addition, she announced that she would be writing to the parents frequently and solicited their attention to these letters because they would contain important news.

Information in letters to parents dealt with six subjects. Approximately a third of the content attempted to inform parents about the curriculum of the Kindergarten. Another third requested or commented on parental support. Requests were for time, materials, or expertise, or were in the form of invitations to attend special events or view displays. The remaining third of the content included requests for snack money, answers to parents' questions, explanation of field trip plans, and interpretation of the philosophy of the Kindergarten.

During the year, it was the policy of the coordinator to make arrangements for personal conferences with the parents. In addition, telephone conferences were used. These conferences were initiated from the coordinator's home, late enough in the evening for the child to be in bed. Whichever parent answered the call participated in the conference, and the calls proved to be informative, relaxed, and enjoyable. Because there was no time limit, as there was when the conference took place during the daytime at school, the call sometimes lasted as long as 45 minutes. Notes of any pertinent information exchanged were made in the child's record, and a date for a personal follow-up conference was sometimes set at the request of the parent. These telephone conferences received favorable comments from the parents and were used both years. Generally, telephone conferences covered the child's relations with his peers, his academic progress (sometimes coupled with a suggestion for a particular activity to be done at home), comments on a particular strength or interest observed by the coordinator, and answers to particular questions posed by the parent. These questions occasionally resulted in a classroom observation by one or both of the child's parents.

During the first year, the aide was absent many times due to illnesses among her own children. On the second day without an aide, one of the mothers was in the room and inquired about plans for a substitute aide. Upon hearing that there was to be no substitute, she volunteered to come in on very short notice to take the aide's place.

This led to further inquiries by the coordinator, and two other mothers were found who liked the idea of coming in to act as aides. A phone call the night before or early the very morning they were needed was sufficient notice for them. During the phone call, the coordinator discussed the plans for the day with the mother-aide-substitute, who then arrived at the Kindergarten with her child. There was only one day during the remainder of the first year when one of these three mothers was not able to assist.

Resulting from this experience with the mothers was a set of forms "About Mothers" and "About Fathers" (see Appendix C) which was ready for use the second year of the Experimental Kindergarten. These forms were used to guide the coordinator, especially early in the second year before she had had the opportunity to establish close personal contacts with the parents. As a direct outgrowth of the set of forms (28 out of the 38 parents returned their forms), parents did the following activities:

Father took the class on a behind-the-scenes tour of a major department store he managed.

Mother brought in the family's new puppy, kept a weight chart at home of the dog's growth,

and brought the dog back four times during the year, with the weight information, so that the group could observe in class the growth of the dog.

Mother shopped for wheels for the woodworking projects.

Father used a hole saw to make dozens of wheels for woodworking projects.

Mother brought to class a loom and demonstrated early colonial overshot weaving. Same family gave a lesson on medicinal plants, made bread with the class, assisted with a unit on molds, and brought to class an elderly grandmother whose hobby was Indian lore and who shared a collection of Indian artifacts.

Father, unable to work because of chronic illness, drove on four trips.

Mother, who had indicated on "About Mothers" that she could only make phone calls, called every family in one evening when an emergency arose necessitating a fast change of plans.

Mother conducted weekly lessons with Piaget materials.

Father who had lived with an Indian tribe trying to help them with hygiene problems gave a slide show depicting his work and the plight of the American Indian today. He displayed a portrait of the chief and related anecdotes concerning their relationship.

Mother, who indicated she liked to bake but was not free to come in, sent home-baked cookies, not for an occasion, but just to break the graham cracker monotony, perhaps five times during the year.

Mother, who was pregnant early in the year and indicated this on the "About Mothers" form allowed herself to be an example of human reproduction and brought to class the newborn baby and his layette and nursing bottles, etc. Some months later she returned with the baby so that the class could observe his growth.

Nearly every family contributed tools and wood and nails for our workshop.

Mother brought a university student along and they made pretzels.

The experiences with parents were extremely rewarding. Parents felt free to participate because the underlying responsibility for the planning and integrating of parent contributions into the program belonged to the coordinator. The children adapted to the varying personalities of the parents with apparent ease, perhaps enjoying the new faces, new voices, and new approaches. Children whose parents participated looked forward eagerly to the entrance of the parents on a day they were coming.

Parental support for school programs is crucial in today's education. On the basis of these two years' experience with parents, it seems possible to think in terms of parental aid to kindergarten programs on a very broad scale. The idea of full parental participation in private and cooperative nursery school and kindergarten settings is well explored and accepted. It is time to expand this idea into the public school kindergartens and upper grades.

There are many ways in which parents could make valuable contributions to nursery schools and kindergartens. Interested parents could help from home with phone calls and could prepare refreshments for special events; they could type memos to parents. In the classroom, they could regularly present an isolated lesson or a series of sessons; they could do housekeeping duties such as mixing paint, straightening and organizing materials, filing children's work into their individual folders, running the duplicator. Parents could be enlisted to supervise a group on the playground or a trip away from the school. In a more subtle role, they could serve as observers of group interaction and supply a teacher with a different view of the group — an extremely valuable dimension for any teacher.

the kindergarten day

The Kindergarten day was three hours long. The aide was hired for a four-hour day. She and the coordinator came to the classroom each day a half hour before the arrival of the children and stayed a half hour beyond their departure. The half hour before the arrival of the children was used for discussing plans for the day, especially for the teacher-supervised, structured instruction and the time devoted to intensive developmental-skills activities. The half hour following the children's departure was used for tidying the room and making anecdotal records of the children.

The children arrived at the Kindergarten at 12:30 p.m., and the whole class met together for the first 15 minutes each day. The children and staff talked about such problems as sharing and use of time. The next 25-30 minutes were for music, show-and-tell, or individual activity. Each child worked on what interested him and many different activities went on simultaneously. In the next block of time, children were engaged in academic learning — reading or math. Each day the class then had a 20-minute physical education period. Following this, small groups worked independently for 30 minutes on perceptual skills activities. Each of the four perceptual skills groups had one or two half-hour lessons each week, with some skill-development sessions taking place every day. The dramatics and music specialists each presented a lesson once a week. After a 15-minute snack period, the class cleaned up the room and evaluated the day. The coordinator or aide told a story during the last 30 minutes.

The basic schedule for the Kindergarten day was as follows:

12:30-12:45 p.m.	Meeting of whole group
12:45- 1:10	Concurrently: music, show-and-tell, individual activity
1:10- 1:40	Reading or mathematics groups
1:40- 2:00	Physical education
2:00- 2:30	Perceptual training concurrently with art, or dramatics or music lesson with specialist
2:30- 2:45	Afternoon snack
2:45- 3:00	Clean up and evaluate
3:00- 3:30	Oral story, prepare to go home

teaching approach

The classroom atmosphere of the Experimental Kindergarten was deliberately planned. The project's basic philosophy was in agreement with that proposed by Rudolph Dreikurs in *Psychology in the Classroom.*[6]

The peer group was considered the moving force in the environment and every effort was made to utilize it. The coordinator acted as a catalyst for peer interaction, deliberately training the children to turn to one another when making a decision, rather than coming first to an adult. There were several ways this was done. For example, each day began with a brief discussion during which the children brought out problems involving sharing, use of time, dissatisfaction with the attitude of a classmate or an adult. The coordinator guided the discussion and attempted to summarize. She also reopened the subject at an appropriate time the next day or the next week to inquire what progress had been made.

Any child approaching an adult with a problem was informed that he must go to his peers who were involved in the problem and invite them to work it out. Adults refrained from entering fisticuffs (unless they threatened real bodily harm), recognizing that these spats are a natural occurrence in the lives of five-year-olds and six-year-olds. After tempers had cooled, alternative positive behavior which might have been effective in the situation was pointed out and sometimes dramatized. For example, on one occasion as the children left the room for the playground, one child pushed his way past another, causing that child to fall against the doorjamb and cry. The coordinator and other children witnessed this event. Immediately the coordinator addressed the group, asking them to analyze the problem: What had happened that made Heather cry? The group commented that John had tried to get out of the door too quickly and without waiting for the doorway to be clear. The coordinator then asked Heather to move to the position she was in before being pushed and asked for a volunteer to act out a better way to go out of the room. This procedure was acted out with John and the rest of the group watching. At the conclusion of this improvisation, the coordinator remarked that accidents do happen. How should John have acted after bumping Heather into the doorjamb? John then became one of the actors, apologizing to Heather for the roughness.

In this case and others, the teacher had to determine the emotional climate of the situation, and she sometimes substituted other children for the offending ones during the improvisation. Other times the children who were involved in the incident portrayed themselves. The coordinator also watched for examples of positive peer interaction and these, too, were dramatized. This way of operating is an attempt to substitute child interaction for teacher preachment.

An atmosphere of freedom with responsibility permeated every aspect of the classroom. The adults expected the children to have freedom with responsibility in relation to them, to each other, to the physical accouterments of the entire building and especially their classroom, and in relation to activities. The staff rejoiced in a conversation with a parent during an end-of-the-year get-together. The mother remarked that her daughter had, during the course of the year, become a great deal less passive in her relationships with her peers. As she had become active, said the mother, she began to take the role of an arbitrator — talking with neighborhood friends about how they could resolve problems that arose as they played. In fact, she commented, she was even giving the family some lessons in group relationships!

Group interaction was built into the Kindergarten program, as exemplified by the Learning Wall and its possibilities for decisions, and by group music activities and dramatics activities which will be discussed later in this report. Open shelving was another example of freedom with responsibility. Open shelving not only permitted children to use all materials at their leisure, but placed on the children the responsibility of returning materials neatly to their places or suffering the consequences of not being able to find what they wanted. Occasionally the whole class had a "treasure hunt" for a piece of misplaced equipment. Cooperation, orderliness, and respect for property were positive results of this responsibility.

In structuring the activities of the Kindergarten, two important factors were considered — *repetition* and *slowness of movement*. Psychologically and physiologically the children in the Experimental Kindergarten seemed to thrive on repetition. An activity was introduced, then used over and over, sometimes with variations. Used in this way, success is assured and the children's positive images are reinforced. A child can say to himself, "I achieved; I succeeded; I like to do that." The more complex the activity, the more repetitions are demanded. An example of a complex, four-step activity is Sound and Motion. It is suitable for developing cognitive, gross motor, and auditory skills. In this activity, the learning group forms a small circle, standing, with a child/leader in the center. While the members of the group observe, the child/leader is given instructions to think of a sound — any sound. Perhaps the child/leader

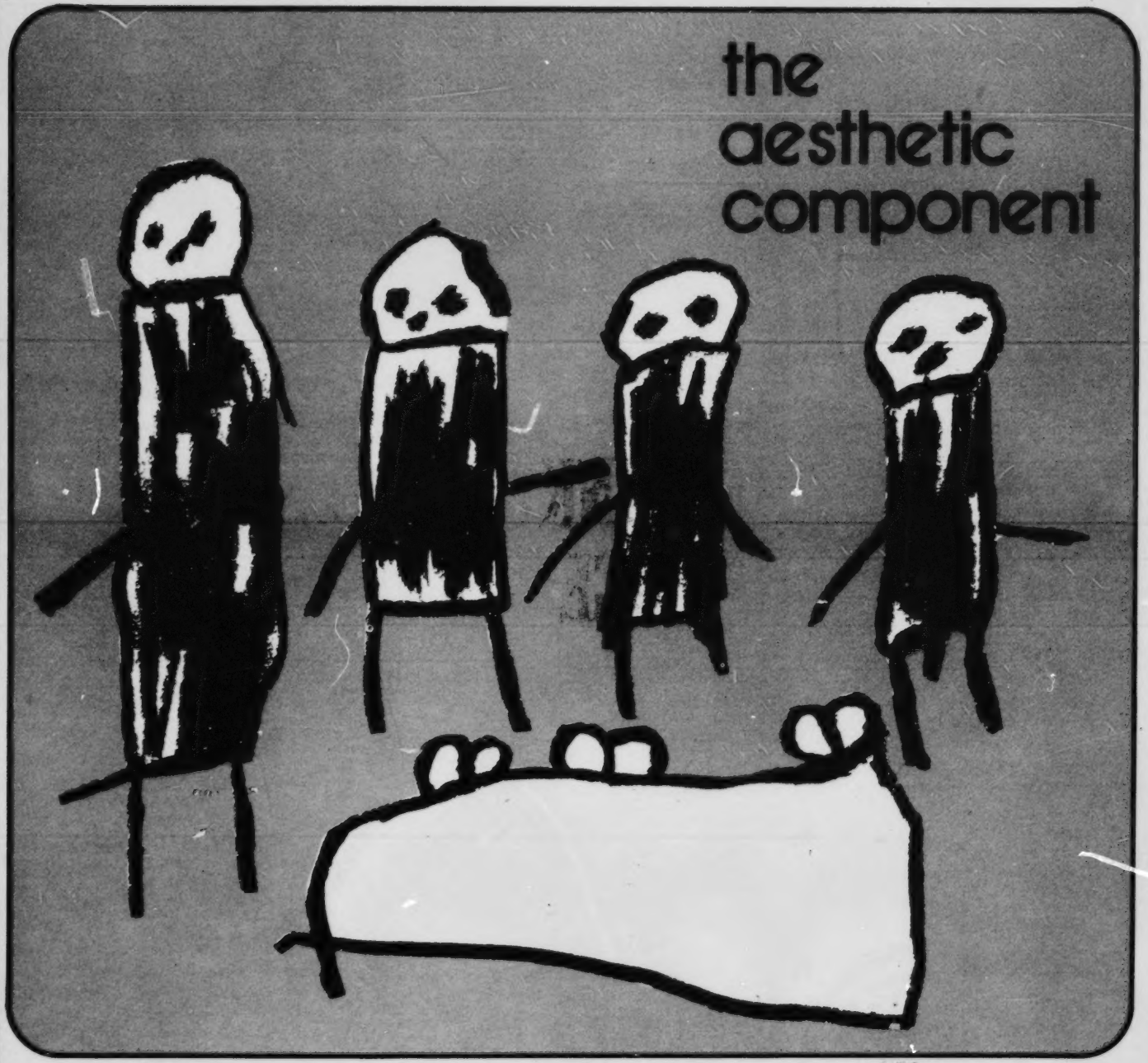
begins to say softly, "beep-beep, beep-beep." Once the sound is established, the child/leader is instructed to make up a motion to go with his sound while continuing it. Perhaps he begins hop-hop, hop-hop. With the sound and motion created and established, the child/leader is given a third instruction to move around the circle presenting the sound and motion in front of each member of the group. After demonstrating to every member of the group, he is told to choose one child to imitate his motion and carry it back to the center of the circle. Finally the child/leader is told to move into the second child's place in the circle. The complexity of this task is enormous. The directions cover four distinct steps; the performance of the task involves cognition, movement, and creation and reception of sounds. The task is highly creative because the child does not imitate but originates the sound and motion.

The Kindergarten coordinator, knowing that peer acceptance is absolutely essential to any operation, introduced this task by acting as the first leader of the activity. Thus, she demonstrated that creating a nonsense sound and a nonsense motion was acceptable behavior and not something silly to be ashamed of doing. At the same time, she made it possible for the children to witness the task. (Active demonstrations were always used in preference to verbal directions.)

After the complete cycle of the activity has been demonstrated once to a group of five children, perhaps one child is able to retain the entire sequence: create a sound; create a movement while continuing the sound; demonstrate both to each member of the group; exchange places with another member of the group. The four remaining members of the group retain some portion of the activity. Because they are not secure in the routine, they will not willingly take a turn. But after they have witnessed the full cycle of the activity a number of times, they will participate without coercion, in fact with pleasure.

The element of repetition is built into nearly all of the early childhood activities which are perpetuated year after year—London Bridge; Farmer in the Dell; Musical Chairs; Doggie, Doggie, Who Has Your Bone? Children beg to play these games over and over. The element of surprise is not attractive, for it is a threat. Familiarity is the thing that draws children to activities.

Many young children cannot perform motor tasks very quickly, nor can they engage in two or more activities simultaneously. Some children at ages below six cannot simultaneously sing and clap; speak and act; dance and sing. Only if an activity is performed very slowly are they comfortable. This is not to say that young children cannot run very fast, cannot suddenly dart to one side, etc; but complex tasks must be taught slowly and they often must be broken into their component parts; an example is the Jumping Jack. The Jumping Jack movement begins with a child standing with legs together and arms at the side. He must then simultaneously thrust his legs apart and raise his arms above his head, clapping overhead; then simultaneously he must return his arms to his sides and his feet to the closed position. A child under the age of six may have to break the task into four segments — thrust the legs apart, then raise the arms overhead and clap, then return the arms to the original position, then return the legs to the original position. After many repetitions of the individual movements, if the child is encouraged to move slowly, he will be able to perform the actions simultaneously. Both classroom and physical education teachers who attempt to use phonograph recordings of rhythms for young children will find that the pace is too fast. The children's reaction time is slow. The Experimental Kindergarten respected both these principles: Provide many repetitions, and move slowly, breaking complex tasks into their component parts. Rhythm instruments, played by the adults or the children, replaced phonograph records as accompaniment for motor activities.


the
aesthetic
component

the aesthetic component

None of the materials or methods drawn from the Early Education Center is particularly innovative. That they seem, for the most part, to demand a minimum of creative input by the child was noted by the planners of the Kindergarten. To offset this situation, in designing the arts-based Kindergarten program a major thrust was made to devise materials and ideas which apply aesthetic skills and creative thinking to developmental skills instruction.

Certain activities which are closely involved with the arts and with aesthetic decision making seemed appropriate to this task. Operating on the hypothesis that the arts could be employed to develop children's receptivity to stimuli, to improve those internal cognitive processes which organize and interpret the stimuli, and to enhance children's expressive skills, the Experimental Kindergarten plan devised activities using language arts, visual arts, drama, music, and the environment to facilitate the building of the basic development skills areas. The arts, thus, were to serve a dual role. They would build motor, auditory, visual, cognitive, and language skills; and they would also provide opportunities for these young children to build a basis for the future development of aesthetic standards, and for active enjoyment of and participation in a wide range of aesthetic experiences.

Following are descriptions of the major activities developed in the arts areas to serve the purposes described above. In order to emphasize the aesthetic dimension of this teaching approach, the activities are described in relation to the primary arts area utilized, and the different skills areas intended to be affected by each activity are pointed out. Many of the activities were intended to improve skills in more than one area. (See Summary Table of Creative Perceptual Skills Training, page 64).

stimulus: language arts

The use of language arts activities in the Experimental Kindergarten program was approached from the attitude that "there must be a belief that the art side of language—emotional, rhythmic, expressive, sensing of values, groping for empathy — is just as important as the communicative, logical, semantic side. A good curriculum aspires to intertwine the two."[7]

The dictation of verbal descriptions to an adult early each year introduced the element of creativity through language. For language-development-skills instruction, this was an important activity. Much of this dictation was done in conjunction with art work. At the completion of a drawing or painting, the adults formed the habit of writing on a strip of paper a simple description dictated by a child and attaching it to his art work. Soon the adult added another dimension to the description by asking a question, such as, "What is the sun thinking while he's shining on that house you painted?" "Oh," says the artist-turned-author, "he's thinking how he wants me to come out of the house (I'm inside, I forgot to tell ya') and run around in circles and circles and circles" (reaching for a brush to add circles and circles).

Each child was given a fifty-cent looseleaf notebook and taught how to use a three-hole punch. He was given several sheets of unlined paper and told that on these sheets he could do

any writing or drawing he chose, and then store it in his notebook. This was in addition to the individual stories the children composed and dictated. Even though the children could not yet read, it was reasoned that one day they might accept the suggestion to look over the things in their notebooks. Then they might find, much to their surprise, that as the year progressed and their reading skills matured, they could read the contents of their notebooks. The plan worked! By April of both years, children were delightedly announcing that they could read the pages in their notebooks. They reveled in them, reading and rereading. Certainly this did not happen in all cases; at the close of the year some children still had little interest in or knowledge of reading. Those children took their notebooks home to enjoy them, perhaps, at a later date.

Questions and suggestions from adults continued to be vital in encouraging children to dictate. The adults had to be alert to pick up a chance remark from a child and say, "Let's write in your notebook about that." Some children never initiated the dictating themselves; others did so more often than it was possible for the adult to carry through. The representative selections at the conclusion of this section (pages 43-45) include two outstanding examples of children's short stories. In both cases the children wrote the stories in their notebooks, dictating parts of them over a period of several weeks without showing signs of losing their trains of thought or inspirations. One of these stories, "The Library," was an outgrowth of repeated trips the class took to the construction site of the new University City Library and to the site from which the library was moving. The author could also stand at the classroom window and observe the final process, the moving of books from one structure to the other. This story is a very fine example of the child's sensory awareness. (Now finished with the first grade, he has written another story which concerns itself with the flight of the Apollo 14 spacecraft.)

The second story, "My Birthday," was begun by the author some weeks before the event. His family was helping him plan the celebration, and he was elated. The story extends through the birthday party and on into the next week when he initiated a conversation about what he would do for his *next* birthday and subsequently wrote the last "chapter" to his book. A third child wrote a complete short story which also was written over a long period of time. The story began when the student related to us that her mother cat was pregnant. As the event came closer, she began to write about it in her notebook. The mother cat hid from the family as the time came for the kittens to be born, and so the story developed a natural climax. It ended at the time the kittens were found. Soon after the child was ready to share the story with the class, she also brought the cat and kittens themselves to share with the class.

It is interesting to observe that in writing "The Library" the child illustrated the material as he wrote it, asking to have a few words dictated on a page and then making detailed line drawings on that page. The children who wrote the other stories did not illustrate them until after they completed the text. As the author of "My Birthday" composed, he did not ask to have any space left for pictures. The text was recopied later with the teacher arranging the spacing and the child fitting in illustrations. The author of the kittens book asked for spacing, then returned to the pages after she had completed the story content and drew all the pictures in one sitting.

Near the end of the first year, the class was visiting a nearby park, and adjacent to the park a residence was being razed. After watching intently for half an hour, a child turned and remarked excitedly to his friend, "Oh, boy! I'm going back to school and write a book about that!" This incident was genuine reinforcement regarding the worth of the creative writing activities.

One of the particularly impressive aspects of the writing project was the long-term effort expended by the children-authors. The ability to work at a creative project over an extended period seemed both a maturing process and a sign of maturity. These children had early established for themselves the reality of aesthetic pleasure derived from completing a task dependent on sustained effort.

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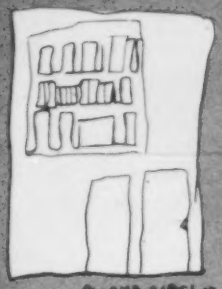
a new library



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a new library

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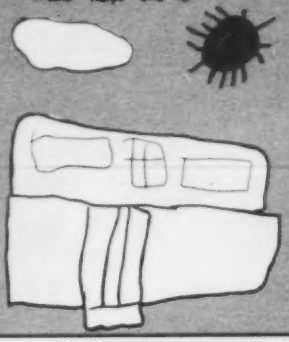
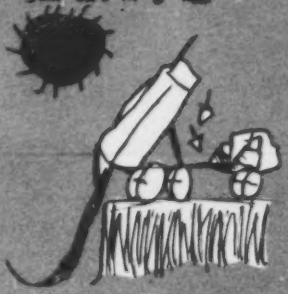


the dump truck

the dump truck is dumping
some dirt in a hol



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the bulldozer

the bulldozer pulls up
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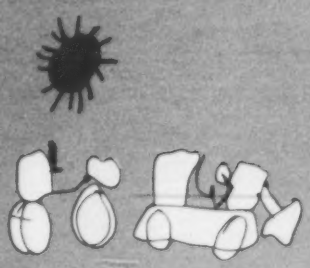

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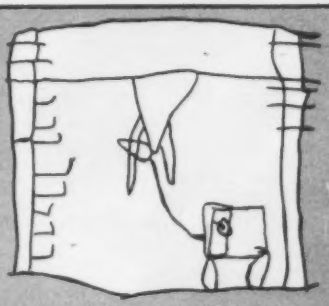

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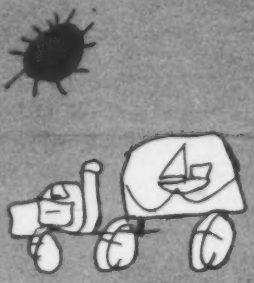

the moving truck

this moving truck carries
books

5

this moving truck carries books to the
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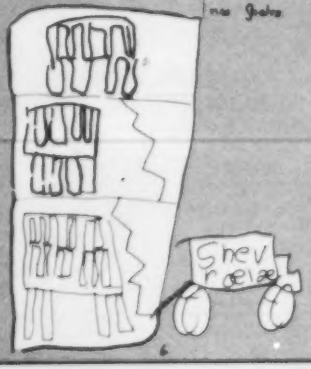

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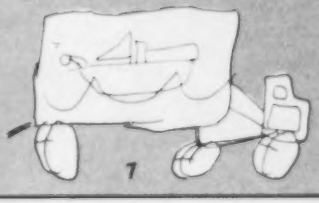

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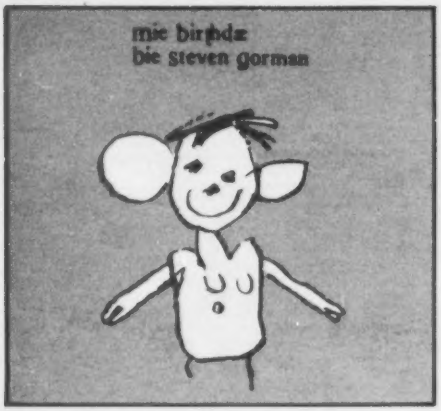

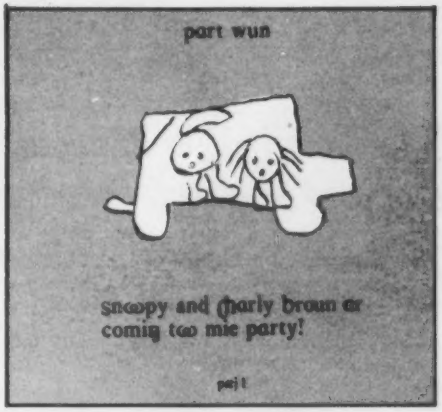

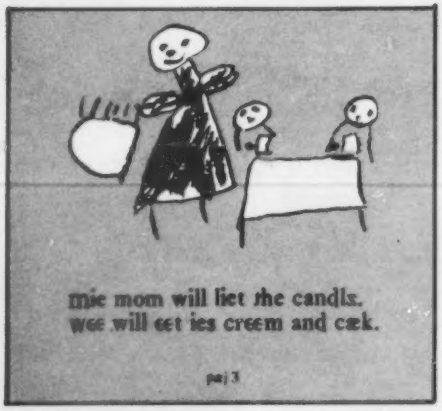

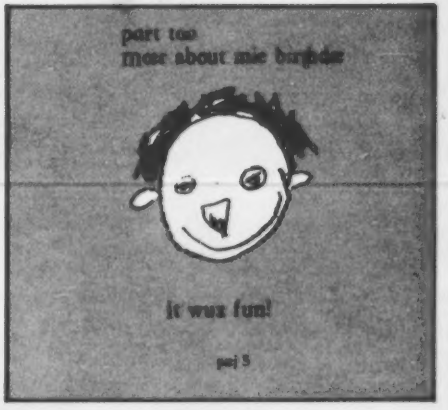

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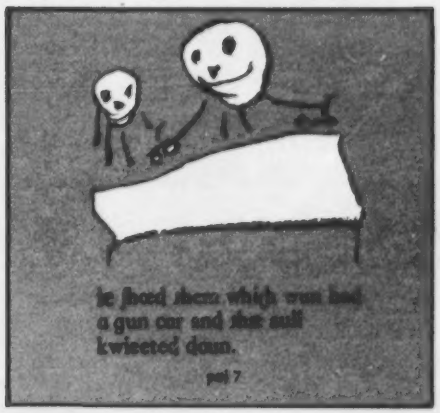
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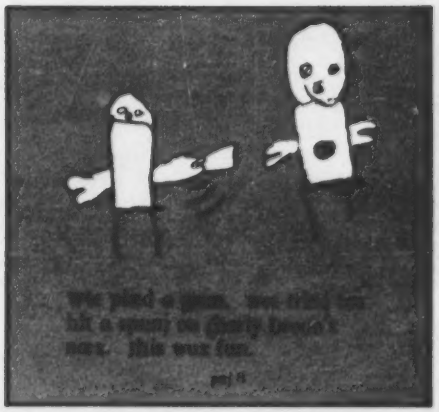

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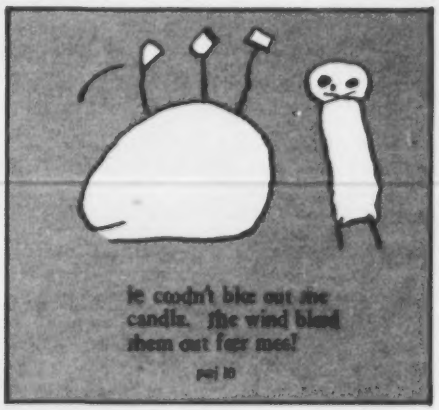
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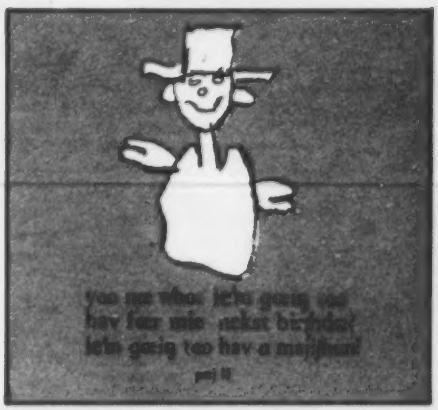
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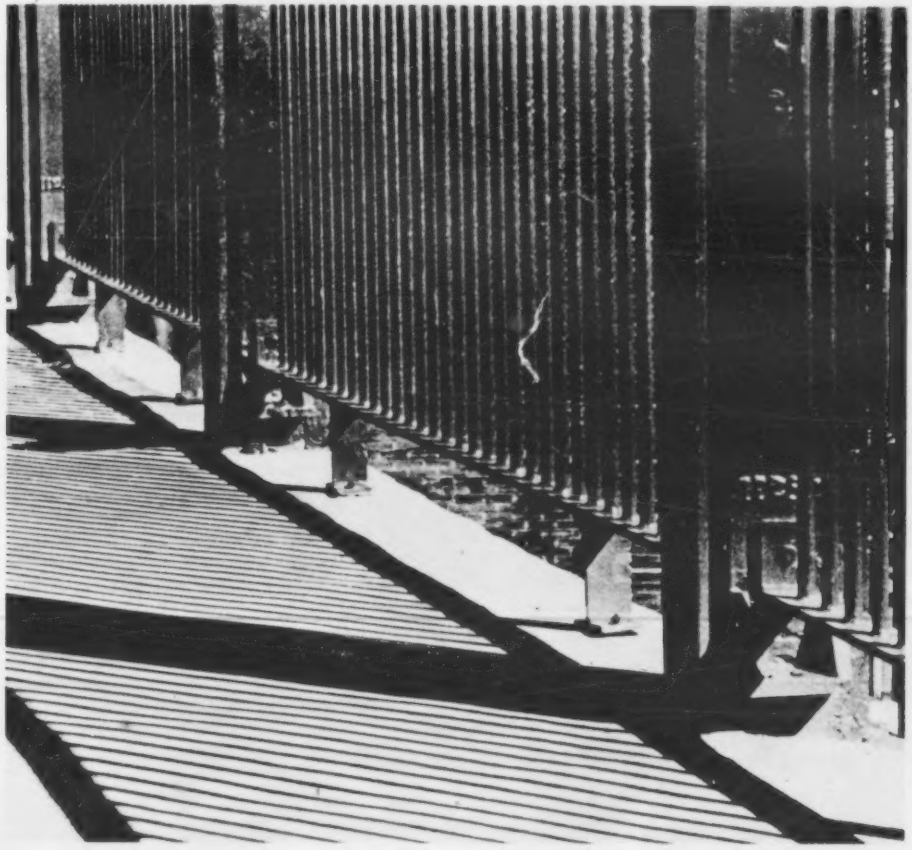
stimulus: visual arts

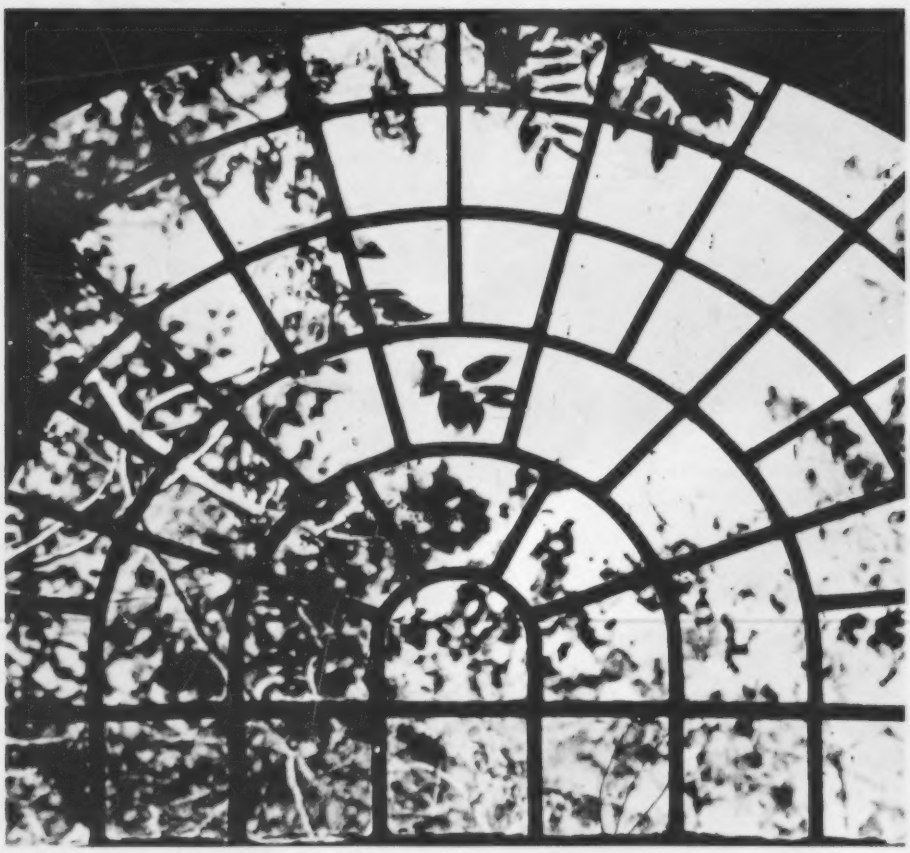
A wide range of visual arts was used to stimulate the children in the development of many skills areas. As a method of encouraging the children to observe and then express themselves, the use of photographs and drawings seemed successful. This technique was used in conjunction with the dictating practices explained above. For this experience the children formed groups of five; a picture was given to each group. None of the five pictures used was the same. Each shows a human figure and a prop — this gave the group a "who" and a "what." Sometimes the prop became a "where." The group was instructed to decide who the figure was and what he was doing and compose a story about it. They were told that a kitchen timer would ring when it was nearly time to be finished and the sound of the gong would indicate that time was up. Each group then chose a "secret place" to work. The coordinator and aide side-coached the groups.[8] The timer was set for five minutes. The gong was sounded about one minute later.

The first time this exercise was tried, three of the groups were able to compose material with a genuine theme. The next time, four of the five groups were able to put together real stories, in the sense that the stories had a character or characters, a setting, one or more episodes, a crisis, and a resolution. For instance, for the picture of a child with food, the group decided that when the mother served this food, the child announced that he was not going to eat it. Mother said he was going to eat it or he would have to go to bed hungry. But still the child refused to



eat and so he did go to bed without eating. For the picture of a boy with a pencil, the children decided that this was Pasqual and his pencil, which had magic qualities — it could erase things as well as draw things. It drew and erased animals, trees, and houses. Then the pencil tried something it had never tried to do before; it tried to erase something it had not drawn. It tried to erase its owner, Pasqual. The magic worked — Pasqual was erased. The story ended. This language arts lesson using pictorial visual art as stimuli was repeated several times, and each time the children showed growth in their story-telling ability and needed less and less side-coaching. Finally, all five groups were able to compose stories with all the proper elements.

Photographs were also used as the stimulus in developing the children's compositional skills in music. The children were encouraged, toward the end of the year, to experiment with a free-form composition pattern built around photographs. (Some of the photographs used are reproduced on these pages.) As these photos were displayed, the children discussed the kinds of rhythmic patterns they felt were depicted and which of the rhythm instruments they thought would be appropriate to illustrate the patterns. Using a canon form, with instruments to introduce each sound and pattern, the children then performed these original compositions. Some compositions took ten seconds, and some extended over a period of a minute or two, with the motifs repeated several times. These compositions were very popular with the children; they were able to remember the established rhythm pattern from one day to another, often asking to

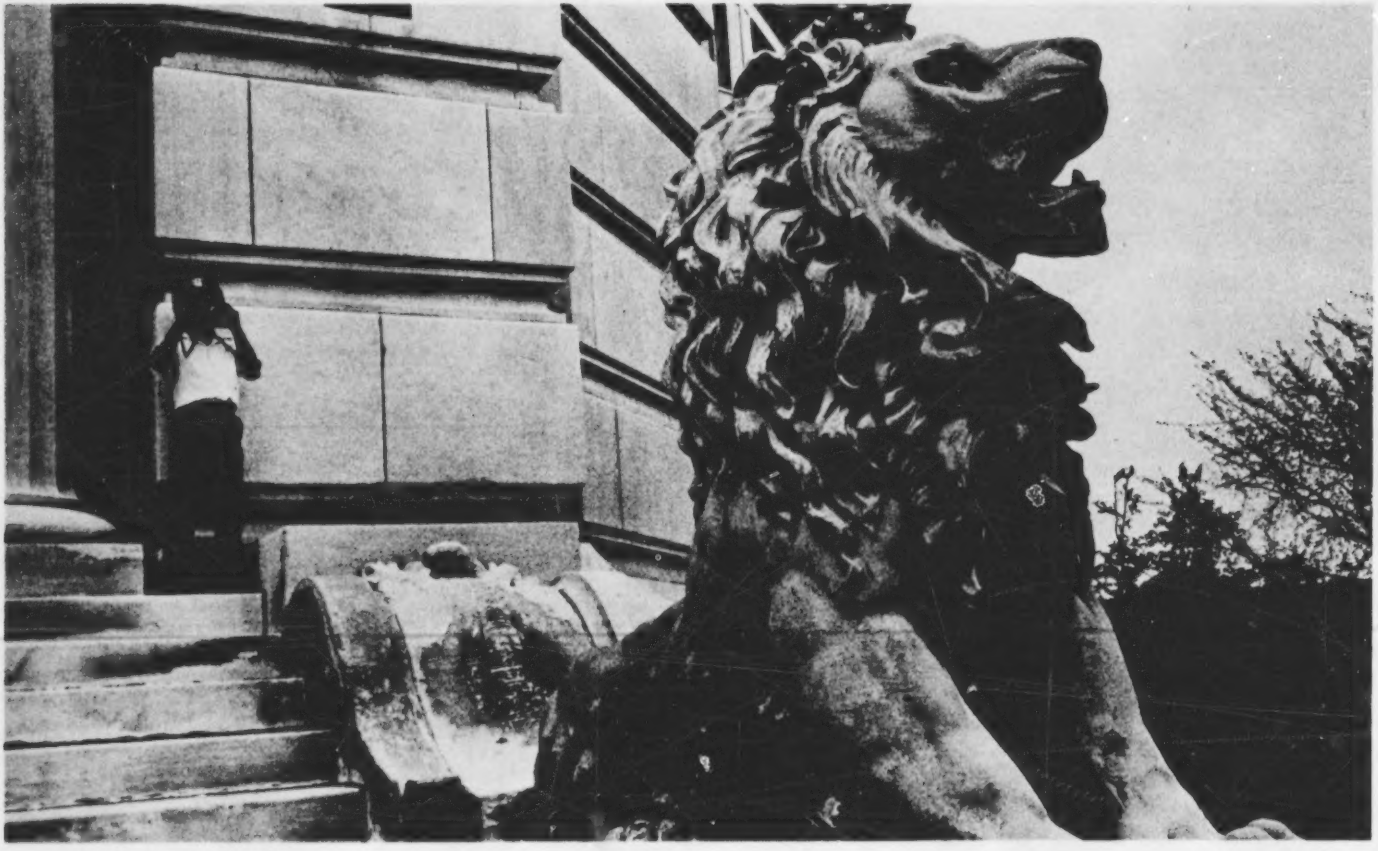


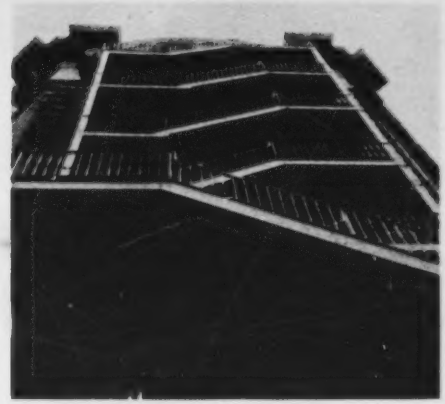
repeat "their music" and requesting other photographs to inspire more music.

This is an example of auditory perceptual instruction in which the child writes the curriculum. The participating children learned interval relationships, tone relationships, and linear progression. While replication of the exact material used would negate the creative dimension of the idea, the format can be easily copied by other teachers.

Perhaps it is instruction in visual perception that best lends itself to an attempt to have the child create the curriculum through more acute sensory awareness. At the Experimental Kindergarten, sight through the camera's eye represented one approach to visual awareness. Instamatic cameras were first presented to the children without film for a lesson in using the cameras. Following this familiarization period, groups of five children went together out into the community on various photographic assignments. All assignments were aimed at encouraging acute sensory awareness. Some assignments involved perspective: "Take pictures of objects high above your head, at your eye level, below your eye level, below you." Some assignments dealt with interior detail: "Take pictures of objects that have many straight lines on them or feel to you as if they are made of mostly straight parts." "Take pictures of objects that do not display many straight lines or that feel as if they are not made mostly of straight lines" (learning to comprehend negation).

The children photographed shapes: cut-down telephone poles, a hexa-





gonal stop sign, a sewer pipe, a car wheel, a doorway, a chain link fence. Another day, working on straight/not-straight, they concentrated on a six-story fire escape, zig-zagging up the side of a building, and on the swirling mane of a sculpted lion. (See pages 48 and 49 for examples of the children's photography.)

In order to get the prints back as soon as possible, one roll was completed on each picture-taking trip, using one camera for five children. The day the film came back the students became highly involved with their photographic products. They discussed each photo in terms of the actual object photographed and the assignment it represented. The photos were mounted in a scrapbook and put on display for all to see.

Other assignments were to photograph architectural details — rooftops and doorways — and to photograph spaces — two structures at once in a way that would show amount of space between buildings. Simultaneous with this photography was an exploration of cities through such books as the Madeline series by Ludwig Bemelmans, "The Red Balloon" by Albert Lamorise, and "The Little House" by Elizabeth Burton.

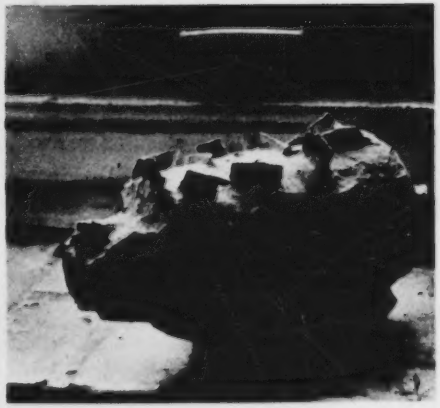
Two graphic displays of the city were developed by the children from these activities — a mural and a "film" for their "T.V." The mural seemed to show several things. The children had observed an unusually large variety (for five-year-olds) of building shapes — cylindrical buildings; tall, flat-topped buildings; a few with tri-cornered roofs. In addition, the children seemed to have understood something of spacing among city buildings. The downtown heart of their mural city was far more crowded with structures than their shopping centers, which, in turn, were more crowded than their residential areas.

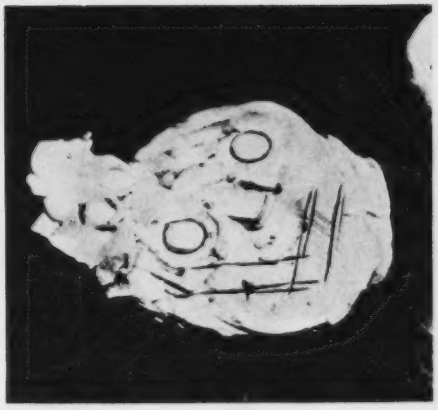
The "T.V." was a box with two rollers, onto which the children's 12" drawings of components of a city, glued together to make a long strip, were rolled. The production of the "T.V. film" presented a problem: the sequence of its pictures was important to bring the city into proper perspective. Four "film directors" were appointed to make the difficult decisions. They discussed putting the fire engine next to the firehouse, the airport far from the homes (noise and pollution!), and the school close enough to the homes for children to walk to it. The final presentation was 40' long and was made up of 30 drawings by 20 children. Gershwin's *An American in Paris* was used as the sound track. The "T.V." presentation fascinated the children and they used it many times. Perhaps its biggest asset was the ease with which they could operate the "T.V."

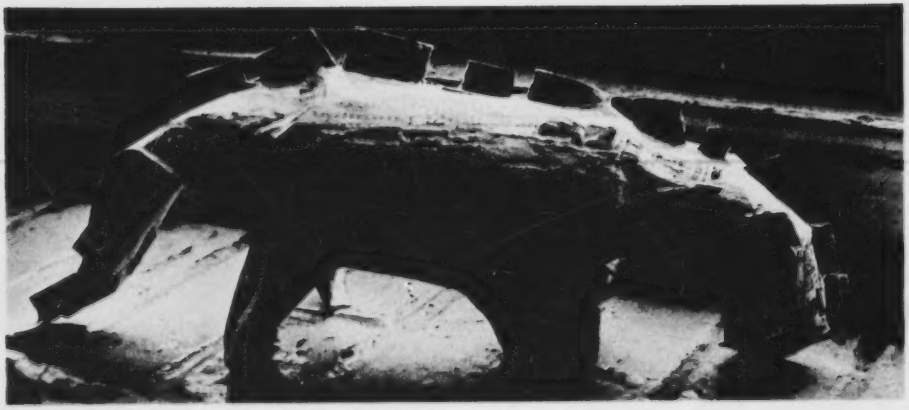
ceramics, finger painting, weaving, and woodworking

Myriads of art projects contributed to the visual-motor development of the children. Clay, finger paint, weaving, and woodwork projects were especially well accepted. In each instance, a long "messing around" period preceded any formal instruction, and the materials were made available day after day.

Clay work began with cutting and conditioning the raw clay. This activity gave the children a chance to manipulate the cutting wire while







reducing a 25 lb. mass to manageable sections. Much pounding with wooden bats was encouraged for a gross eye-hand maneuver. As the children became deeply involved with the material, the coordinator moved into the activity with questions such as: How tall (short) can you make your clay? Narrow? Wide? Fat? How can it hang down from the table's surface? How skinny a snake? How fat a hot dog? Use of the coil method followed and also work on a simple armature, a long nail stuck into a board over which the children fashioned busts. The children participating in this activity were encouraged to ornament their work by pressing a found object into it to make a print.

Finger painting began with the long "messing around" period. The coordinator then began to work with the children, actually creating a finger painting of her own while demonstrating and verbalizing specific movements that she wished to have the children practice: strong left to right movements, long verticals, horizontal movements, concentric circles, movements that stressed crossing the midline of the body. Two-handed coordinating movements followed. In this fashion the attempt was made to use an art media in conjunction with many of the experiences recommended in the Gettman-Kane Program for developing learning readiness. The advantages of the finger painting medium are the ease with which the children's hands glide over the surface, the pleasure associated with finger painting, and the immediate eradication of any errors making it possible for the children to avoid embarrassment about any ineptitude.

After many experiences with hands as the only tools, the exercises were varied by adding combs, twigs, shells, sponges, and other objects which the children could draw through the finger paint and press into it. Examples of pleasing designs resulting from this phase of instruction were preserved for the children to take home.

Weaving was done on a loom, using scraps of yarn, bias strips of fabric cut 1" wide or wider, strips of crepe paper, package wrapping ribbon, and other found materials. A group project, the weaving produced two mats

approximately 12" x 18". The loom was made from a topless wooden box (from the food store produce department) with nails inserted into the short ends.

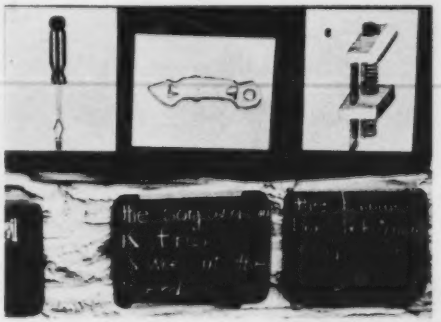
A woodwork shop was opened immediately after winter vacation and was used by the whole class with outstanding success. Two of the children worked in the shop each day. On their day, woodworking was allowed preference for those two children over every other activity except skill instruction. If a child wished to spend all of the remainder of the time in the workshop that day, he was allowed to do so without interruption. No child ever passed his turn! All possible hand tools were available, loaned by parents. The workbench, with vise (a must!), was made by the custodian. For children needing help with visual-motor skills, the most important tool was the hammer. Inept children pounded large nails into styrofoam (available as discarded packing box material) until they became more adept.

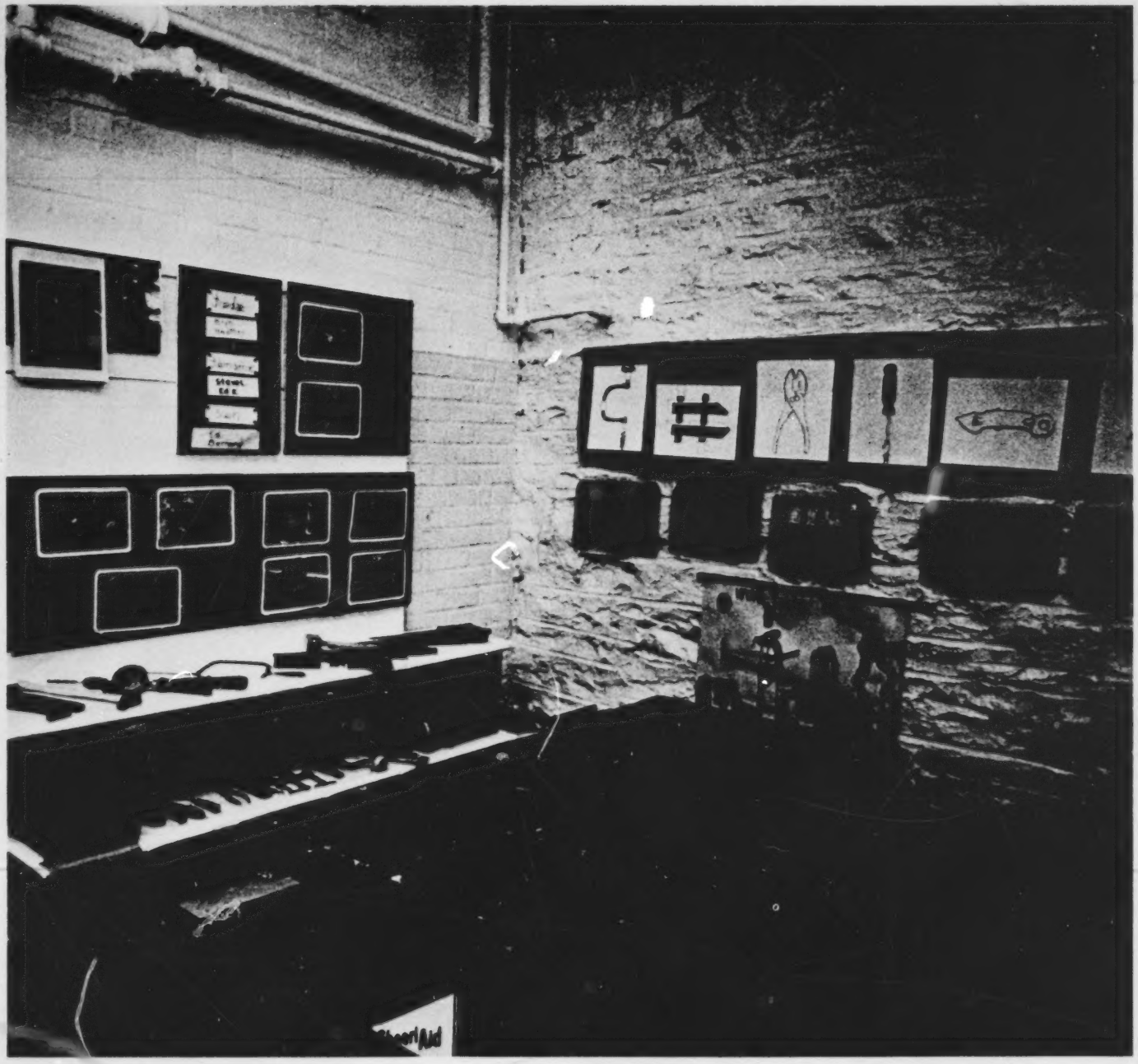
Instruction in woodworking took several forms. Each tool was introduced separately with a discussion of ways to use it and how to use it safely. The coordinator demonstrated methods of using tools, including clamping, drilling, stance when sawing, and choosing a nail of the proper length. She did not suggest projects for children to make; they invented boats, planes, cars, swords, guns, chairs, rhythm instruments. One girl made an ingenious gear mechanism moved by rubber bands.

Chants were made from the names of the tools:

Screwdriver, hammer, coping saw, clamp (repeat)

Ostinato: Bang, shush; bang, shush; etc.





stimulus: drama

Drama was used in connection with the development of skills in several areas. Impromptu dramatizations of many of the books read by the children were used as a means of encouraging the development of language skills. Favorites were *The Three Billy Goats Gruff* (with Educubes forming the bridge; note the troll under the bridge at right), *The Gingerbread Man*, *The Little Red Hen*, *Caps for Sale*, and scenes from *Make Way for Ducklings* (especially scenes about the policeman, Michael).

The children, it was found, must be completely at home with the story before attempting the improvisations. They must absorb the words and the characters. Therefore, the books to be dramatized were repeated over and over before the children began to portray them dramatically. Again, this seems to rest on the thesis proposed early in this report: children cannot perform simultaneous operations until they are at home with the different operations separately.

Even though the trend today in literature at the early education level is away from fantasy and toward reality, folktales represented a rich source of material for dramatic improvisations coordinated with visual arts in the Experimental Kindergarten. Märchen tales, animal tales, and cumulative tales were most frequently told aloud rather than read from a book. "Millions of Cats," "The Five Chinese Brothers," "The Golden Goose," "Gone is Gone," "Drakestail," "The Hare and the Hedge Hog," "The Well of the World's End," "The Bee," "The Mouse and the Bum-Clock," "Budulinek," "The Fisherman

the dinosaur, the mushroom, and the bee

Once upon a time there lived a dinosaur named Tiny Tim. Every day Tiny Tim liked to go to the nearby playground to play. He would ride the horse (clop, clop, clop). He would spin on the spinner (whoosh, whoosh) and he would slide down the wide, red sliding board (whee . . . . .).

After he finished playing, Tiny Tim discovered he was very hungry. He walked into the forest in search of food (thump, thump, thump, swish, swish, swish). Pretty soon he found a lovely clump of mushrooms basking in the sunshine. Tiny Tim thought, "Oh, how good they would taste."

As he thumped near the mushrooms, they became very frightened of the large dinosaur and began to shake. You see, they were very afraid that they would be eaten or stomped upon by Tiny Tim's big feet.

But just as Tiny Tim opened his mouth to eat his first mushroom, he heard a buzzing sound (buzz, buzz, buzz). He shook his head back and forth to try to get rid of the sound, but it would't go away. He looked and looked, only to find a tiny bee angrily buzzing. Tiny Tim was afraid of the bee because he knew that the bee would sting him if he made it angry. He walked a few steps away hoping the bee would fly somewhere else, but the bee just kept following him. Tiny Tim began to run and the bee just flew faster and buzzed more angrily. Pretty soon Tiny Tim was galloping away, heading for home. The bee laughed at the big dinosaur trying to get away.

When he was sure that Tiny Tim would not come back, the bee flew back to the mushrooms to tell them that they were safe. He buzzed right on top of a pretty little mushroom and said, "You don't have to be afraid any more. Tiny Tim won't be back today."

The mushrooms were still shaking, afraid that the bee might sting them. "Please don't hurt us," they begged.

The bee said, "I want to be your friend. Please don't cry."

All of a sudden the bee had a wonderful idea. "I'll tell you what," said the bee. "If you let me be your friend and play with you, I'll keep the dinosaur away."

"What a great idea," said the mushrooms. "Of course you can be our friend. Welcome to our forest."

And the bee and the mushrooms have been good friends ever since.

and His Wife," and "The Old Woman and the Pig" were among the folktales used. The measure of success was that all the children preferred listening to a "told" tale over any other activity. The children improvised "The Five Chinese Brothers," "Drakestail," "Budulinek," and "Nobody Listens to Andrew." They drew the story of "Drakestail" for their "T.V." (described on page 50).

Creative dramatics and motor improvisations were used in the development of perceptual skills areas. Students working toward improvement of visual-motor skills wrote stories with actions. (For an example of one of the stories, "The Dinosaur, The Mushrooms and The Bee," see left.) The children first wrote the story then gave each character a motion. The children were challenged to recall what movement accompanied each part of the story and to perform it at the appropriate time. Or, individual children took different parts which they performed at the proper time. The children then added a visual stimulus by making posters depicting the motion they were to perform. The pictures showed the action cues. One picture depicted the dinosaur's feet and a child using his hands in the motion which would represent the dinosaur's feet. Other posters depicted the bee and a child making the motion for the bee, etc.

Three exercises in creative dramatics lent themselves nicely to the improvement of visual-motor skills. They were called Mirrors, Puppets, and Pass the Sound and Motion. In Mirrors, a piece of orchestral music was played while the children stood facing one another at a distance of about two feet. One child of the pair was the "mirror" and the other tried to do exactly what he saw "in the mirror." The "mirror" was

directed to make his movements slowly and continuously so that one motion flowed into the next. Thus, one child created the motions, while the other tried to follow. The children who followed the motions became accurate observers, and all of the children developed muscular control. This exercise, then, actually contributed to growth in two skills areas, visual perception and gross motor control.

Puppets was a variation on the Mirror exercise. In Puppets, the children took the same positions, but one child pretended he controlled the other by a string attached to the end of his nose. When the puppeteer moved the imaginary string, the puppet was to respond with the appropriate action. The children were told that the string was eight inches long and that the puppeteer was to make his puppet move in smooth continuous motions. Again, the activity spanned the visual and the gross motor areas.

The third exercise, Sound and Motion, is described on page 35 of this report. Nearly all activities such as the ones described above were done to music.

Creative dramatics lends itself easily to motor-skills instruction. Many creative drama activities require cooperation between two or more students; thus, learning to work together is an important fringe benefit of creative dramatics.

Various activities of the creative dramatics type can be performed with a piece of string 10' long and tied together at the ends. The children were instructed to assume any position they wished with their bodies and, using their string loop, to form a square (or any other shape). Some children formed the square while standing by stretching the string between their vertically outstretched hands and then running it beneath their feet. Some lay on their backs with arms and legs thrust skyward and stretched the string from their hands and feet. Other shapes were similarly formed. Two children worked together with one piece of string to form letters or numerals, a tree, or a house. After some experimentation they invented their own ideas for shapes to form with their string loops.

In another similar activity, children formed their bodies into letters or numeral shapes that were drawn on the chalkboard or shown on the overhead projector. In still another exercise, Moving Through Matter, the children pretended they were walking through a given substance such as honey, peanut butter, clouds, chewing gum, or cotton. Good body control is gained as the children learn to move slowly, as if pushing through these substances.

Machines was another creative dramatics activity requiring group cooperation, muscular control, and imagination. The children were to form machines using their own bodies as the machine parts. For instance, if the children decided they would be a typewriter, one child became the keys, one the space bar, one the roller, one the carriage return, etc. They arranged themselves and moved in such a way that the moving parts blended to represent the whole machine and, as they did this, they vocalized sounds peculiar to that particular machine. Coordinating all these elements successfully led to a feeling of great accomplishment on the part of the children.

stimulus: music

Music was another art stimulus which formed the basis for much creative work. Work with music facilitated auditory skills development in the areas of attending, memory, comprehension, and, especially, via nonsense syllables, discrimination. Many, many chanted rhythmic patterns were invented by the children:

Names: Lá-fay-ette, Pé-ter, Mí-chael, Ańn; (repeat)
Ostinato: Our names — our names — our names—our names.

Favorite Fruits: Stráw-ber-ries, peâ-ches, chér-ries, grápes; (repeat)
Ostinato: Yum yum yum yum, etc.

Transport: Jét planes, e-leć-tric trains, bus-es, cars; (repeat)
Ostinato: Whir, beep, screech; whir, beep, screech; etc.

Indians: Chér-o-kee, Chíp-pe-wa, Shaw-nee, Sioux; (repeat).

Holidays: Chán-nu-kah, Chríst-mas, Hal-lo-weén, BOO!

The chants became so integrated into the children's style that they began them about anything at any time. ("Crácк-ers, crácк-ers, bró-ken crácк-ers, bró-ken crácк-ers...")

As the children became more adept, a pachen (combination clap and knee-touch) was introduced. Again it was noted that some children had difficulty performing the pachen with the chant if the pace was quick or the material not well integrated into their cognitive scheme.

Following many original chants and instruction in the methods of Zoltan

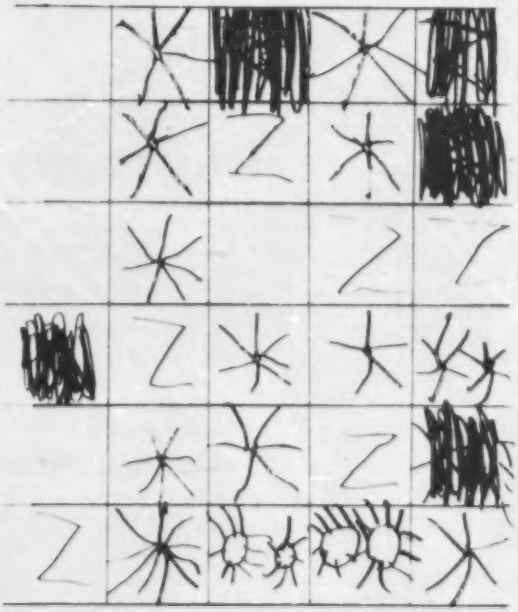
Kodaly,[9] the children working with chants began to notate them. (For examples, see below.) The children were able to diagram the slow and quick beats of the chants they composed. Soon they were able to attend to the rhythm of other songs and instrumental lines and demonstrate how these would be diagrammed.

Free experimentation -- a long "messing around" period — with musical instruments was an integral part of the music program. Children can appreciate the possibilities of the sounds of the instruments only if they are free to listen to the sound of each as they play it and if they play it often. A child must hit a drumhead with his hand, with a soft mallet, a hard mallet, or even with his head. He must be able to tighten the skin and listen, loosen the skin and listen, listen and listen and listen.

Each of the instruments was introduced to the children during a different lesson, with instructions as to its care. Once introduced into the room, an instrument was in sight and within reach at all times, and not a single one was lost or broken during the year. The children seemed to know by the atmosphere of the room when it was permissible to play the instruments. Rarely did a child have to be reminded that others were doing quiet work and that he would have to choose a quieter instrument or wait until another time to use the loud one.

Following this period of experimentation, the coordinator began to suggest specific use of the instruments. Talking Drums was one of the first exercises. Children worked in pairs for this. One of the pair invented

child-produced
kodaly music charts



simple rhythmic patterns which the partner attempted to replicate. As the children became proficient, the pause or rest was pointed out to them and they were asked to work on short and long rests. The patterns (as on page 59) that the children had written earlier were then played on the instruments.

As children worked on the glockenspiel and the xylophones, a crude notation was worked out so that children could write melodies. The xylophone had a range of 1½ octaves. In the notation, the lower notes (longer xylophone bars) were designated by physically larger notation. Thus a low C and a high C would be designated, C;c. The closer together the notes, the shorter their time value. Spaces indicated rests. At first children practiced known melodies, notated by the coordinator. Later they dictated their own. These notation strips were rolled up and placed in plastic pill cylinders labeled "David's Tune" and "Ann's Tune." As with other skills, simultaneous processes such as reading and striking, and the transfer of the eye fixation from notation to instrument were difficult. Many repetitions produced proficiency.

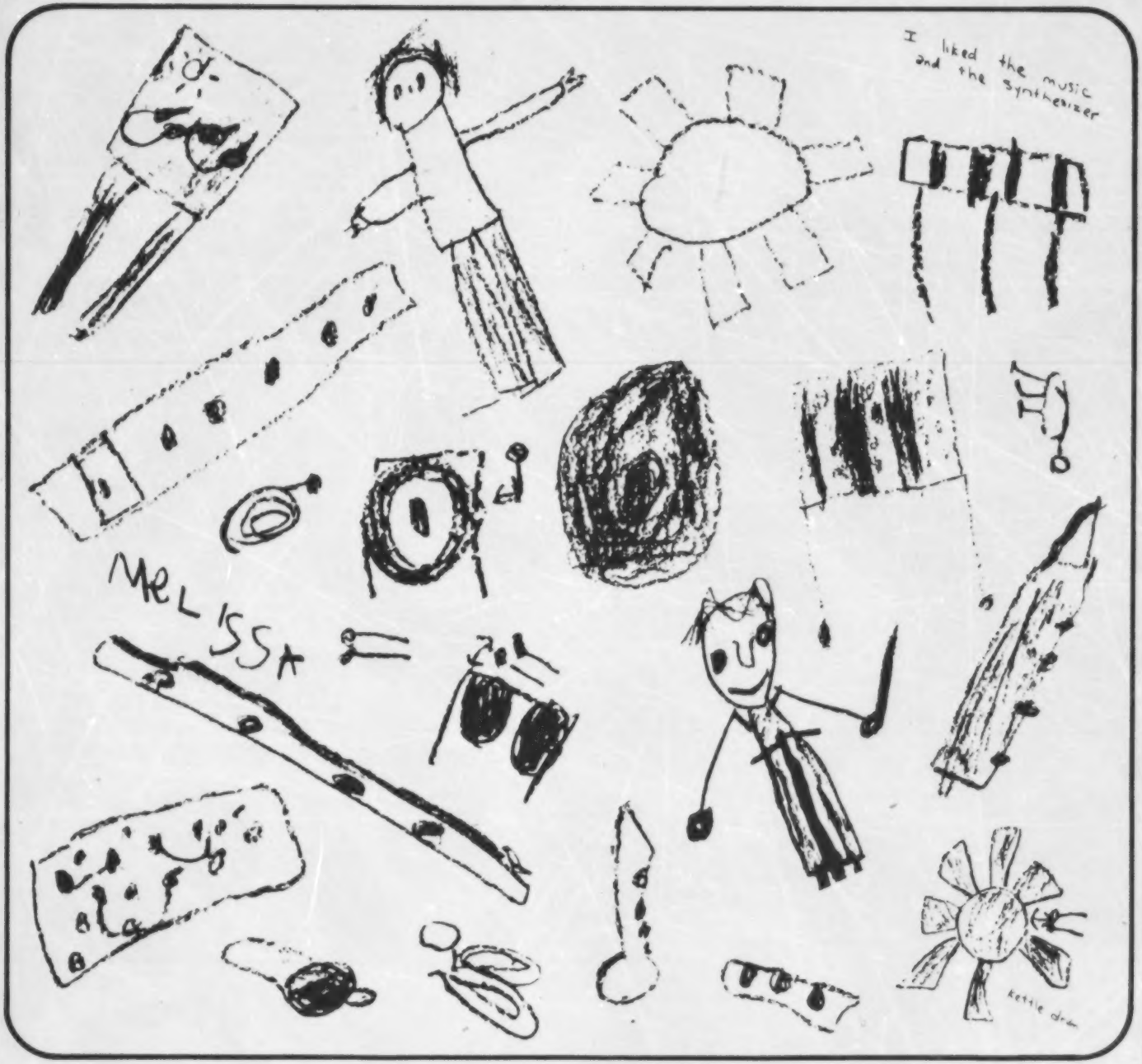
Direct interaction with musical performances was desirable for all the children and especially for those needing auditory development. During the first year of the Experimental Kindergarten, the coordinator suggested to the Arts in General Education Music Specialist that the musical organizations of the junior high schools and high schools become a learning laboratory for the kindergartens and primary grades of the school system. This suggestion was put into practice in two ways during the second year of the project. First, as

an adjunct to the musical experiences described above, music students from the sixth grade came to the Kindergarten in small groups and demonstrated their instruments. The Learning Wall was used to display pictures of instruments during this study unit. Second, the high school music director arranged for the Kindergarten class to come to a rehearsal of the high school band. A great deal more was gained from these experiences than had been imagined when they were suggested.

The Kindergarten children, in intimate contact with the sixth-graders-turned-teachers, gave rapt attention for demonstrations which lasted nearly an hour. The instruments were available for inspection and the dialogue was lively. During the following days, two Kindergarten children brought from home instruments belonging to older siblings and they themselves gave more instruction to their own classmates.

The visit to the high school band contained none of the distracting elements that can turn a visit to a professional band or orchestra into something other than a musical experience. Because the high school music room is conceived as a teaching facility and is not designed for an audience, the children did not have to sit in chairs removed from the instruments and the sound, but sat for awhile in a group at the feet of the conductor and then moved freely among the players as they rehearsed, touching the players, touching the instruments, and putting their ears to the "comes out here" part of the instruments. At first the Kindergartners were unsure that they were really welcome to circulate among the band members; the parameters of behavior had not been defined for them before the visit since the coordinator and the AGE specialist were walking on new ground and had no way of determining how the high school personnel would react to the young visitors. However, the climate was favorable and the children able to be very free. As they were quietly directed to move about, they became more relaxed. They seemed to feel that the hour passed all too quickly.

The high school visited by the Kindergartners has an electronic synthesizer. Although it was not in use for composition when the children were at the school, it was demonstrated for them. It was a special discovery to hear how their own voices could be modified mechanically to create other-world types of sounds. A few of the children's drawings, which they did following the visit to the high school, are reproduced on page 63. The instruments are depicted as very large in relation to the child. Many of the instruments are shown in great detail, signaling careful observation by the child. Some children concentrated on one instrument; some observed a variety. Some children made a written statement indicating their reaction, "I liked the slide trombone. You have space to move your hand around." Some made only a visual statement of what they had seen.


I liked the music and the synthesizer
MELISSA
kettle dru

stimulus: environment

Because aesthetic encounters occur in and with the environment as much as they do with specifically artistic products, the world outside the classroom had much to offer the Experimental Kindergarten.

The public library was a frequent meeting place for the group concentrating on language skills. Learning to love books and words and expressive phrases was the rationale for taking this group to the library. At first they concentrated more on the water fountain, the rest rooms, and the small furnishings than on the books. Browsing with the children, the coordinator helped them choose many books to take back to the classroom for reading in the ensuing week, and she also helped them choose one or two books that she would share with them at the library. Because the encouragement of writing and speaking in the children was part of the Kindergarten design and because it was assumed that reading and hearing provide the basis for writing and speaking, much effort was expended to increase the children's enjoyment of books. In the fall, one of these children hardly looked at a book and never spoke if he could point. Toward the end of the year, this child was responsible for an outstanding bit of imagery. While observing children at work in the woodshop, he eloquently commented on what he saw. "The hammer," he said, "looks like a mouth eating the nail in."

The arrival of earth-moving equipment at a vacant lot near the school presented an opportunity for visual perception of progressive change in the immediate surroundings. The children made many trips to the site to observe transformation of a vacant lot into a parking area. Besides seeing the equipment and the men working with it, the children were able to draw out patterns of materials usage (first, smoothed earth; then heavy chat; light chat; and then the top layer, asphalt). They became aware of the length of time required to change a part of their surroundings.

This study of the construction of the parking lot went far beyond the realm of visual perception. It included sounds of the heavy equipment, voices and attitudes of many different construction workers, and handling of tools and materials. Samples of building materials were collected, and some children arrived home with hunks of the parking lot's component parts. (No parent complained!)

An immediate piece of the environment, the Educubes, part of the room's furniture, were utilized in many ways. As explained earlier, Educubes played an important part in the creative dramatics program in the Experimental Kindergarten. They were adaptable to the building of almost any structure; they were lightweight, colorful, and nearly indestructible.

Besides their use in dramatic play, the Educubes were suitable for illustrating many abstract concepts and, because of their large size and attractive colors, the children particularly liked them. Children working on improving their motor skills used the cubes to form mazes to help them with perception of space. They also used the cubes for defining space as they learned to master different motor combinations, such as jump and leap, bend and roll, etc. Thus, the cubes served many vital purposes.

During the Experimental Kindergarten's first year, The Space Place was in residence at Daniel Boone Elementary School in University City. The Space Place is a manipulable, room-size environment created by a team of designers and educators. Two excursions were made to The Space Place by the class that year. In the second year it was moved to Delmar-Harvard School; this allowed the Kindergartners to make a number of visits.

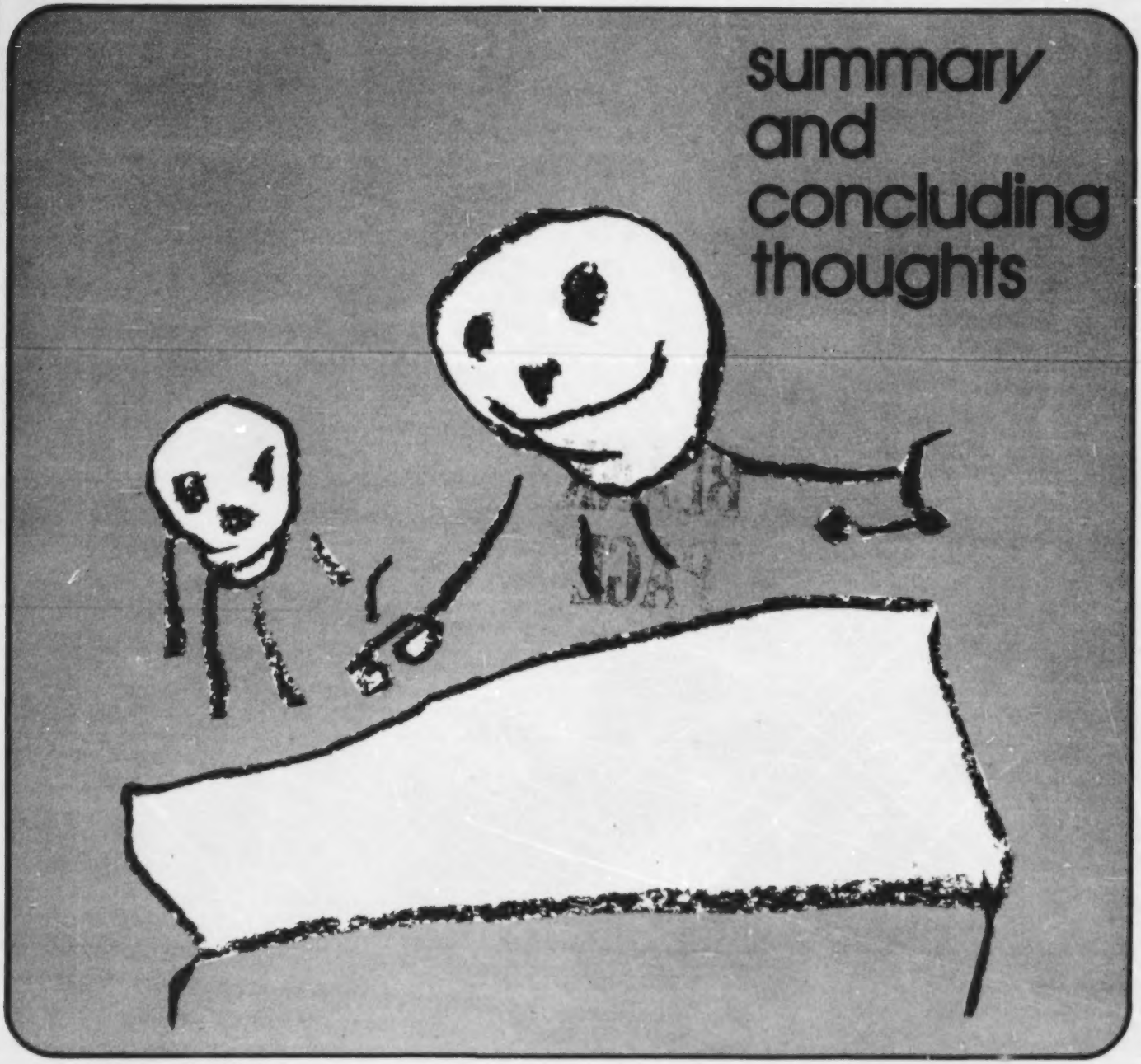
During both years' visits, periods of free play were combined with cooperative projects. The children were divided into small groups headed by a captain; the task of each group was to cooperate in working out a specific problem such as constructing an igloo, a wall, a clubhouse, or a secret hideout. All of the groups cooperated to form a structure in which the walls radiated from a central column of blocks; each group was responsible for one wall. Parents and children were informed that the visits to The Space Place would provide an opportunity for the children to make their own decisions about the environment they live in, learn in, and play in — to manipulate an environment designed just for the purpose. Activities centering around The Space Place aided both motor and visual skills instruction.

A table graphically representing the various arts-based activities used to facilitate skills-development areas concludes this section of the report.

summary table of creative perceptual skills training

Legend: * prime area of concentration
+ secondary area of concentration

arts stimuli	area of concentration				
	language	motor (gross)	motor (fine)	auditory	visual
theater games		*		*	*
interaction with flexible environmental modules		*			
Space Place		*			+
chants	+			*	
musical instrumentation				*	
musical notation			+ follow notation with eyes, transfer fixation to instrument, produce sound	*	+
group games		+		*	
do-it-yourself songs	+			*	
cameras			+ operation of camera		*
film loops					*
story books	*			+	
told tales, dramatized	*			+	
sham TV	*		+		+ attending to stimuli for completed project
creative writing	*				
woodworking	+ vocabulary development, names of tools and operations with them		*		
ceramics	+ vocabulary development, names of forms, processes		*		
fingerpainting			*		
paper sculpture			*		
stitchery			*		
found object sculpture			* puppets-fabricated for dramatic improvisations in language area		
photographs	*				
weaving			*		
trip to orchestra rehearsal	+			* original instrumental compositions	+
excursions into the community	*				*


summary
and
concluding
thoughts

summary and concluding thoughts

To restate the objectives for the program, the design and the expected outcomes of the Experimental Kindergarten Project were:

1 To extend the Early Education Center (EEC) to include the creativity factor in the student profile and to design activities centered in the arts which would foster the development of creative problem solving.

2 To design arts activities which would help to develop both in-depth perception and aesthetic learning.

3 To design a learning environment conducive to general perceptual learning, aesthetic education, and a positive attitude toward learning.

4 Within the context of this learning environment, to satisfy basic skill requirements for entry into the first grade.

5 To introduce the student to a learning situation where he would share the responsibility for instruction and would need to maintain a working relationship with his peers in order to participate in the classroom activities, i.e. an open classroom.

It seems appropriate at this point to speculate on how well these objectives were carried out. The following summarizes the work that was done to meet all objectives and indicates direction for the future.

Each of the children who attended the Experimental Kindergarten received instruction in one or more of the perceptual areas, although the concentration at the Kindergarten level was not so great as at the EEC. Each child worked in these highly concentrated sessions a half hour to an hour a week; whereas, at the EEC each child had received a minimum of an hour and twenty minutes instruction per week. Within the framework of the three-hour Kindergarten day, it was impossible to have every child participate in an instruction session daily and also receive formal instruction in reading and mathematics. An attempt to work with every child every day would have necessitated more personnel. Even this would not have solved the problem, as the program would certainly have become more blocked out in terms of time modules. If this had happened, the free choice element would have been reduced undesirably.

While much of the material used in this second year of perceptual instruction was a continuation or a variation of EEC material and activities, some progress was made in identifying creative activities based on the arts.

That no thorough on-going curriculum program was solidified during the Experimental Kindergarten's two years of development and implementation was a strength of the program rather than a weakness. The genuine accomplishment of this project was the setting up of guidelines for early childhood specialists engaged in organizing programs which depart from a traditional curriculum structure. What was defined was a broad framework with areas for development. This framework became a basis for selecting instruction for the individual student. The teacher, as a diagnostician, had alternative methods or strategies for designing the activities of each student or groups of students using this model. Thus, the curriculum was not structured on a month-to-month, day-by-day basis, but continually evolved out of the individual needs of the students. As those needs changed, so did the curriculum.

The very fact that the student did have the responsibility of making choices and that the teacher had to deal with individual students in the context of this broader framework had a measurable effect on the program for the teacher and the student. Designing the curriculum became a process of instructional decision by the teacher based on the interests of the students. The curriculum that evolved had meaning both for the teacher and the student and was structured to center around remedying the student's weaknesses and accelerating his strengths. The milieu arising from such a program was one in which the student assumed responsibility for certain activities that he was not forced to accomplish, but encouraged to undertake, and in which he wanted to participate. It was an environment where the student learned because he wanted to learn, where he wanted to go to school because he enjoyed what happened in that environment. It was an environment where the student's relationship with the teacher was one of companionship and trust rather than fear or suspicion. All these qualities characterized the group of children that participated in this experiment. This kind of environment in education is a difficult one to create. The qualities of such an environment should be a part of every school system and this is seen as possible because the approach outlined here worked with real children in a real school setting.

Yet, were basic skili requirements for entry into the first grade satisfied within the context of this learning environment? A separate report with more empirical data to justify the speculation on this question has been prepared. However, it was the judgment of the coordinator based on two years' observation that, at a minimum, the students in this program were not ill-prepared for their first-grade experience. In the area of verbal skills, which is one of the major criteria for judging the total school experience, the students did reach a high degree of sophistication for this level of development.

As is described in this report, the initial teaching alphabet (i.t.a.) system was employed in teaching reading. Each year of the Kindergarten, more than half of the class were blending sounds; more than three-fourths of the class were able to associate the correct sound with the 44 i.t.a. symbols. The first year of the program two students were reading traditional orthography at a beginning first-grade level by mid-spring of the Kindergarten year. During the second year of the program, four of the students attained this level of achievement. Therefore, it was demonstrated that the large majority of the students did gain the necessary skills for entering the first grade. Exceptions were noted in three children who exhibited marked language deficiencies at the time they entered the Kindergarten program.

One must keep in mind that it is an open question whether these traditional language criteria should be applied to a program of this type. There are many questions that any such study leaves unanswered, such as: Will this child who has become strong in one area of perceptual concentration become weaker somewhere else? If he showed some strength on his profile as a visual learner, will he continue to be a visual learner even though his instruction is concentrated on his auditory reception? Will his rate of growth show a spurt now as he participates in this program, then level off or regress? Unfortunately, the study was not conceived nor funded as a longitudinal one providing a framework for answering these questions. The type of approach developed through the Kindergarten should not be an isolated experience, but should be continued as a constant in the student's long-range educational plan; it should, in other words, permeate the educational experience. To accomplish this is extremely difficult, as this kind of approach is so dependent on the individual teacher and the atmosphere and environment that person creates in the classroom. Yet, it is not an unreal or inconceivable situation that a teacher can provide a rapport and trust relationship such as the one developed in this program. This is conceivable even when children and teachers change from year to year. However, being conscious of the implication of education projects and their generalizability, we can only speculate on this point, rather than provide that hard empirical data which so many people revere and somehow treasure as evidence of accomplishment.

notes

[1]Alice O. Coffman, and James M. Dunlap, "The Effects of Assessment and Personalized Programming on Subsequent Intellectual Development of Pre-Kindergarten and Kindergarten Children" (University City, Missouri).

[2]"Personalizing Early Education," (University City, Missouri: Office of Prekindergarten - Kindergarten Research Center, School District of University City, December 1967) p. 2.

[3]The instrument for measuring gross motor accomplishment is locally developed and normed and consists of such tasks as performing on a walking beam, climbing stairs, skipping, hopping, jumping, throwing a ball at a target, jumping over an obstacle, and demonstrating balance in place.

The Illinois Test of Psycholinguistics Ability and the Keith Beery Test for Visual Motor Integration are used. The child's ability to attend to the tasks given him and the relationship he established with the tester are recorded on a locally developed Behavior Rating Scale.

[4]The Circle/Round Test series, a set of three experimental tests devised at the Early Childhood Research Center at Syracuse University, measures three dimensions of creative thinking—the child's degree of fluency in the use of circles, or his ability to relate the circle to a larger group of circular objects; his ability to abstract; and his ability to redefine an object, to think of something else into which it could be made. The second instrument, the Starkweather Test, was developed by Elizabeth K. Starkweather at Oklahoma State University. Presented with several plastic pieces in different shapes, the child is asked to give many responses as to what the pieces look like or might be. The number of different responses determines the score.

[5]*Today's Education* (Washington, D.C.: National Education Association, April 1970).

[6]Rudolph Dreikurs, *Psychology in the Classroom*, 2nd ed. (New York: Harper and Row, 1968).

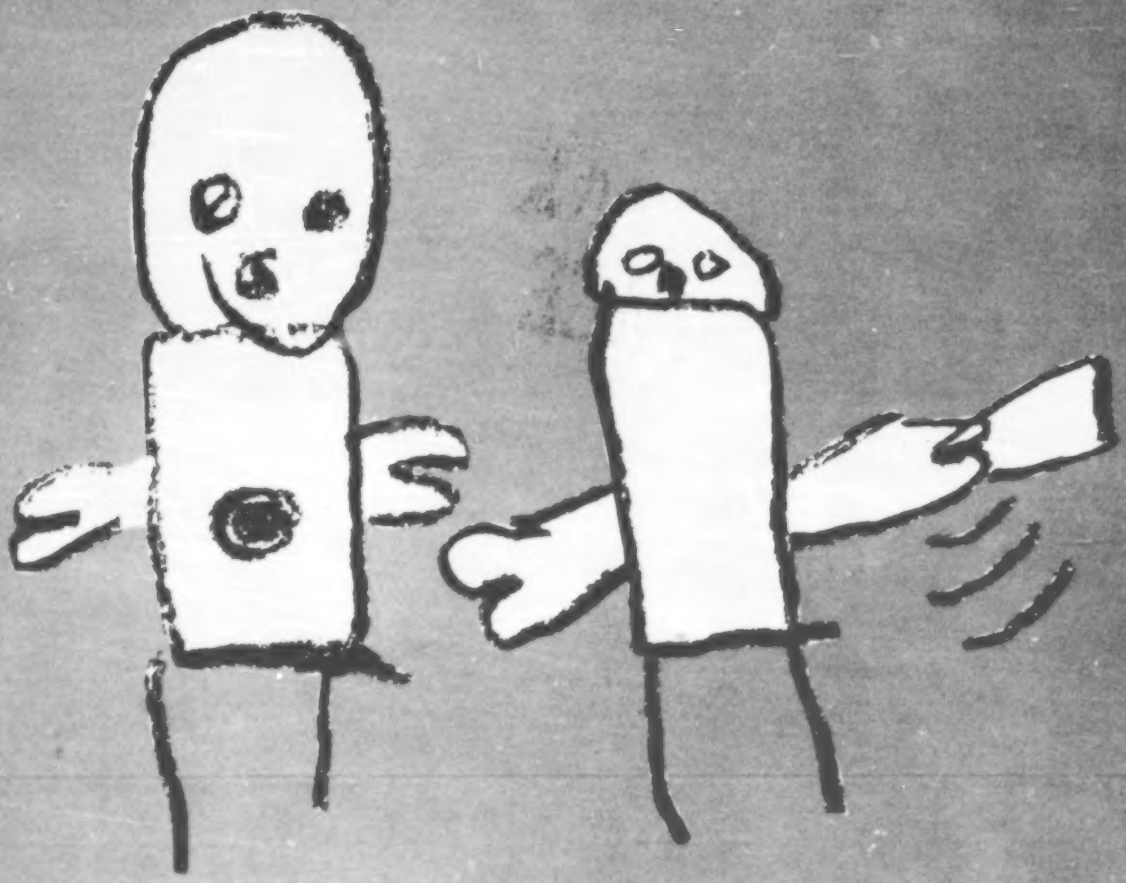
[7]Mabel Wright Henry, *Creative Experiences in Oral Language* (Champaign, Illinois: National Council of Teachers of English, 1967).

[8]Viola Spolin, *Improvisation for the Theatre* (Evanston, Illinois: Northwestern University Press, 1963).

[9]Mary Helen Richards, *Threshold to Music. The First Three Years* (Kodaly) (New York: Harper and Row).

appendix a:

extension to the kindergarten of EEC skills-development activities



some activities planned for gross motor development

Gross motor activities fall into several categories or fundamental movements: simple locomotor tasks such as walking, hopping, jumping, and running; locomotor combinations such as skipping (a step and a hop), kicking (a step and a leg thrust), or galloping (step slide, step slide); and locomotor and body combinations such as leaping, swinging, walking, twisting, bending, dodging. The *Physiology of Readiness* Program is used as basic preparation in these movements. Normed for seven-year-olds, some of the activities must be simplified. This program helps children understand what they are capable of doing with their bodies. In addition, the children must understand their movements in relation to the space around them. Activities are designed to help with this concept.

The following are examples of types of activities that are planned for children whose profiles follow the gross motor pattern illustrated on this page.

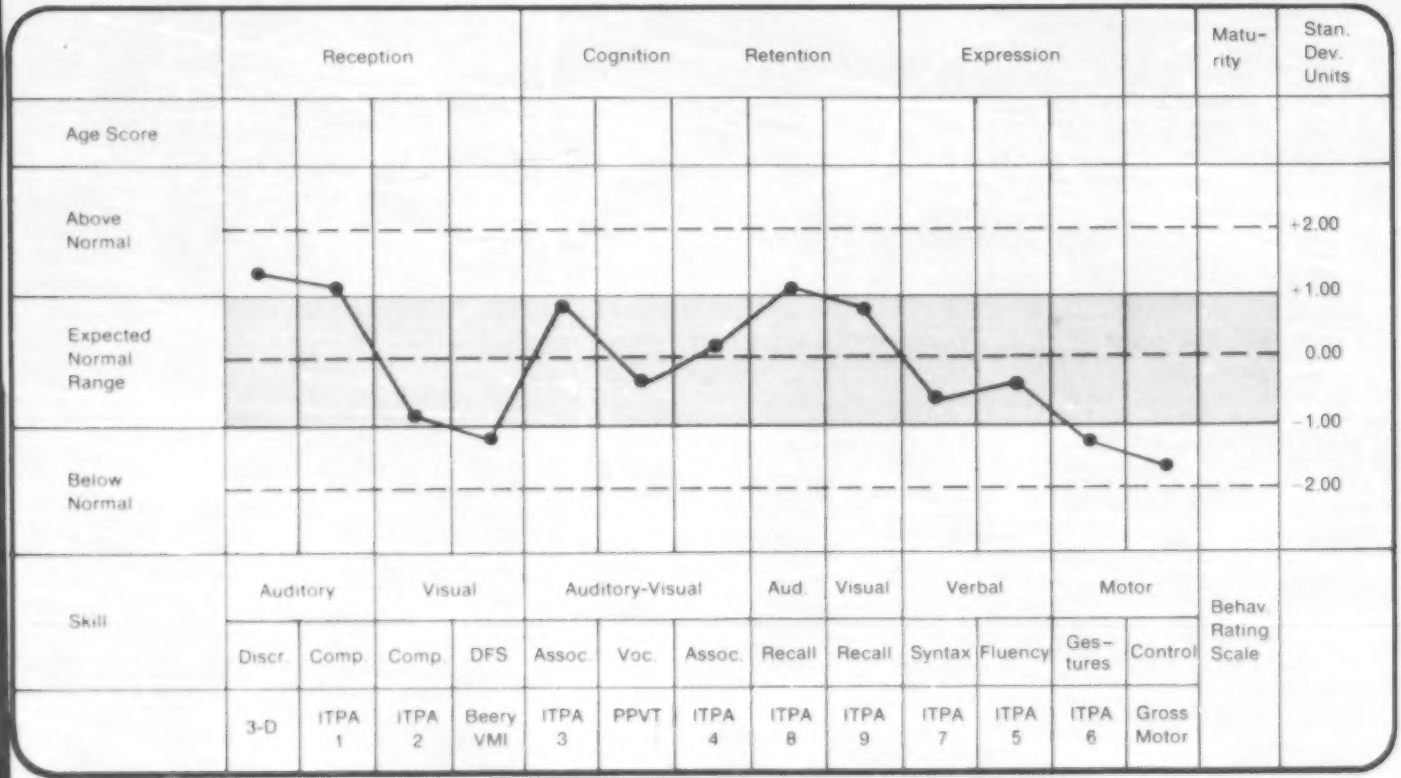
1 Perform numerous tasks on the walking beam and the balance board.

2 Play tag games to teach dodging, bending, twisting, leaping, and swinging.

3 Jump rope.

4 Walk in slow motion. (This and the following activity teach control and balance.)

profile
early education test battery : example of gross motor pattern



5 Walk through matter.

6 Play follow the leader.

7 Perform stunts and tumbling.

8 Do animal imitations.

The four activities following are planned to aid in the perception of space.

1 Run obstacle courses designed with tight squeezes; jump from various heights, low bridges, and inclined planes.

2 Climb ropes and trees (perception of heights).

3 Play blindfold games.

4 Play target games.

class activities inventory: gross motor skills

	Age	(Child's Name)	(Child's Name)
Runs easily	2		
Steps over obstacles easily	2		
Kicks large ball	2		
Jumps—both feet in place	2½		
Rides tricycle using pedals	3		
Walks down stairs (alternate feet)	3-4		
Balances on 1 foot 4 seconds Balances on 1 foot 8 seconds	4 5		
Throws overhand	4		
Walks balance beam 1 step-off Walks balance beam 0 steps-off	4 5		
Gallops	4		
Hops on one foot	4½		
Skips—alternate feet	5		
Gross pattern walking	4		
Can stop quickly when running	5		

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some activities planned for visual-motor integration

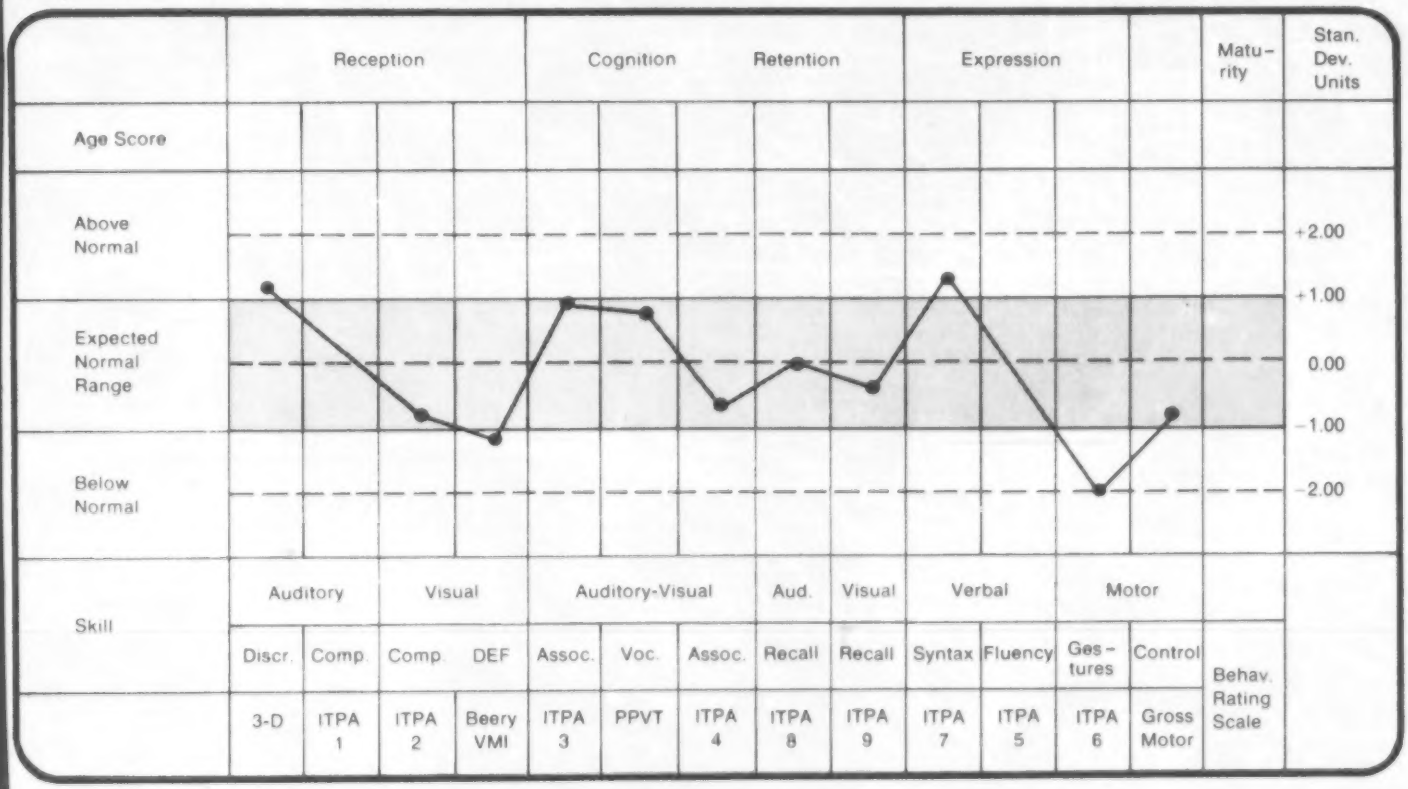
Children needing improvement in visual-motor skills have difficulty cutting, tracing, pasting, coloring, lacing, tying. Sometimes they have not yet settled on whether they have left-hand or right-hand dominance, even though they have passed their fifth birthday. Art and construction activities are extremely helpful to these children.

The Frostig Development Program in Visual Perception and the *Primer of Motor Development* by Edith O'Connor are used extensively with this group. The following are examples of types of additional activities that are planned for children whose profiles follow the visual-motor pattern illustrated below.

1 Pour sand and rice.
2 Lace and braid and weave.
3 Hammer nails and screw nuts and bolts.
4 Prepare and form papier-mache.
5 Construct collages from natural and man-made materials.

Progress is made from larger materials and more gross activities to those which require a high degree of precision.

profile
early education test battery : example of visual motor pattern



class activities inventory: visual motor control

	Age	(Child's Name)	(Child's Name)
Grasps and releases on target	1		
Uses thumb and fingers to pick up small objects	1		
Transfers object from hand/hand	2		
Turns pages of book singly	2		
Builds block tower (of 6) (of 8)	2 $2\frac{1}{2}$		
Strings beads (4 in 2 minutes)	3		
Builds block bridge (copy)	3		
Cuts with scissors	3		
Places forms in form board	3		
Copies circle drawing	3		
Buttons coat	3-4		
Folds paper (3 creases)	4		
Uses pencil	4-5		
Prints simple letters	5		
Ties shoe	5-6		

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some activities planned for auditory development

Children who do not hear sounds, words, and sentences correctly or do not hear language used very much will need help in learning to pay attention, to discriminate between like and/or unlike sounds, to retain what they hear, and to understand what they hear. The following are examples of types of activities that were planned for children whose profiles followed the auditory pattern illustrated on page 80.

auditory attention
(learning what to listen for)

1 Put a bag over the head of one child. Designate another child to speak to him. Can the first child recognize the voice of the speaker? (attention and discrimination)

2 Play "Mother May I." The child must attend to the directions in order to be eligible to perform the desired motor activity.

3 Give the children cards with numerals on them. Hit a drum three times. The children hold up the numeral three.

4 Play "Which Comes First," a riddle game. Say such things as, "Which comes first, an egg in its shell or a fried egg in the pan?" (higher level, more cognitive)

auditory discrimination
(distinguishing between sounds)

The following activities are examples of teaching high/low pitch concept:

1 (with body action) Make yourself as HIGH as you can; as LOW as you can.

2 Listen to the piano/xylophone/glockenspiel. Start with your body as low as you can make it. Here's the lowest note on the piano/xylophone/glockenspiel. Get higher with your body when you hear higher sounds on the instrument.

3 Practice tone matching with voice.

4 Sing:

Hell-o are you low? *Hell-o are you high?*

Play game with the above song. One child closes eyes, faces second child. Second child arranges his body posture in a high or low position. First child sings, "Hello, are you (high? low?)." Second child answers, "Hello, I am (high, low)."

5 Find pictures in magazines depicting high/low. Place on Learning Wall. Discuss and pantomime high/low situations depicted such as clouds, planes, birds; roots, caves, submarines.

6 Learn "I'll Chase You Round the Mountain," from the *Woodie Guthrie Song Book*, the final refrain being a scale from low to high.

auditory memory
(remembering what was heard)

1 Sing songs which are cumulative such as "Green Grass Grew All Around" and "Farmer in the Dell."

2 Play cumulative stories and games, such as "I'm going on a picnic and I'm taking my *basket*." New Person, "I'm going on a picnic and I'm taking my *basket* and my *bug spray*," etc. (higher level cognition involved, as child decides what to add as well as retaining information)

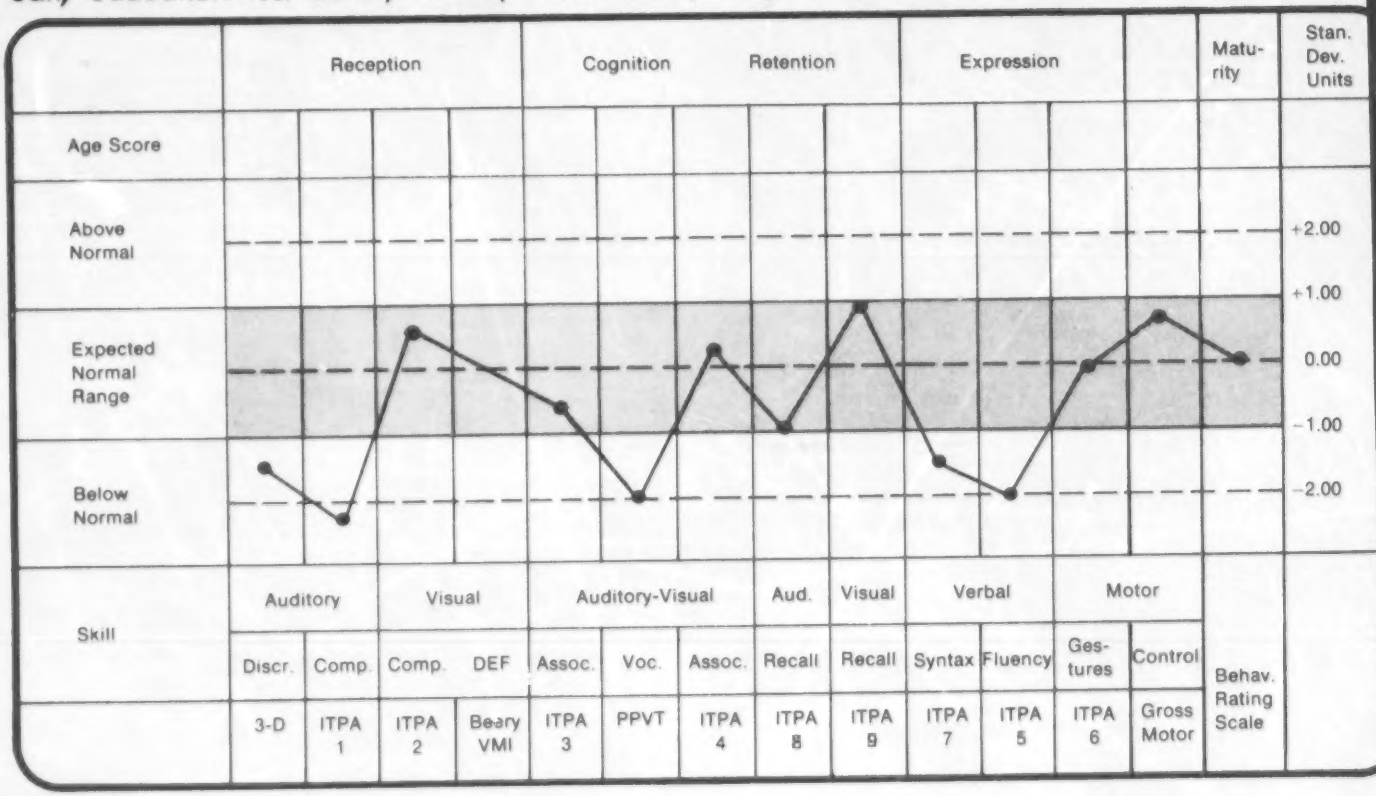
3 Use riddles:
I eat leaves off tall trees.
I am not a calf;
I am a (*giraffe*).

I say bow-wow.
I rhyme with log.
I am a (*dog*).

4 Listen to simple stories, e.g. "Little Red Hen," and act them out supplying repetitive lines, such as "I won't," said the rat; "I won't," said the mouse, etc.

5 Record environmental sounds such as motor cycle, fire siren, school bell, trash collector dumping, water running down the drain, typewriter. Children listen (attention), remember, and speculate as to what they heard (comprehension).

profile
early education test battery : example of auditory language pattern



class inventory sheet: auditory skills

(Used with permission of the author, Mrs. Jeanne Prentice.)

	Age	(Child's Name)	(Child's Name)	(Child's Name)
Responds to gross sounds	1			
Detects source of sounds	1-2			
Follows rhythmic pattern with clapping (hands)	2			
Follows single verbal direction	3			
Discriminates loud and soft sounds	4			
Discriminates high and low sounds	4			
Follows rhythmic pattern matching, etc.	4-5			
Follows two art directions	4-5			
Discriminates common sounds or patterns	4-5			
Follows a series of three directions	5			
Identifies environmental sounds	4-5			
Responds to certain key words in story	4			
Supplies words omitted from familiar story	5-6			
Gives attention	3			

some activities planned for visual development

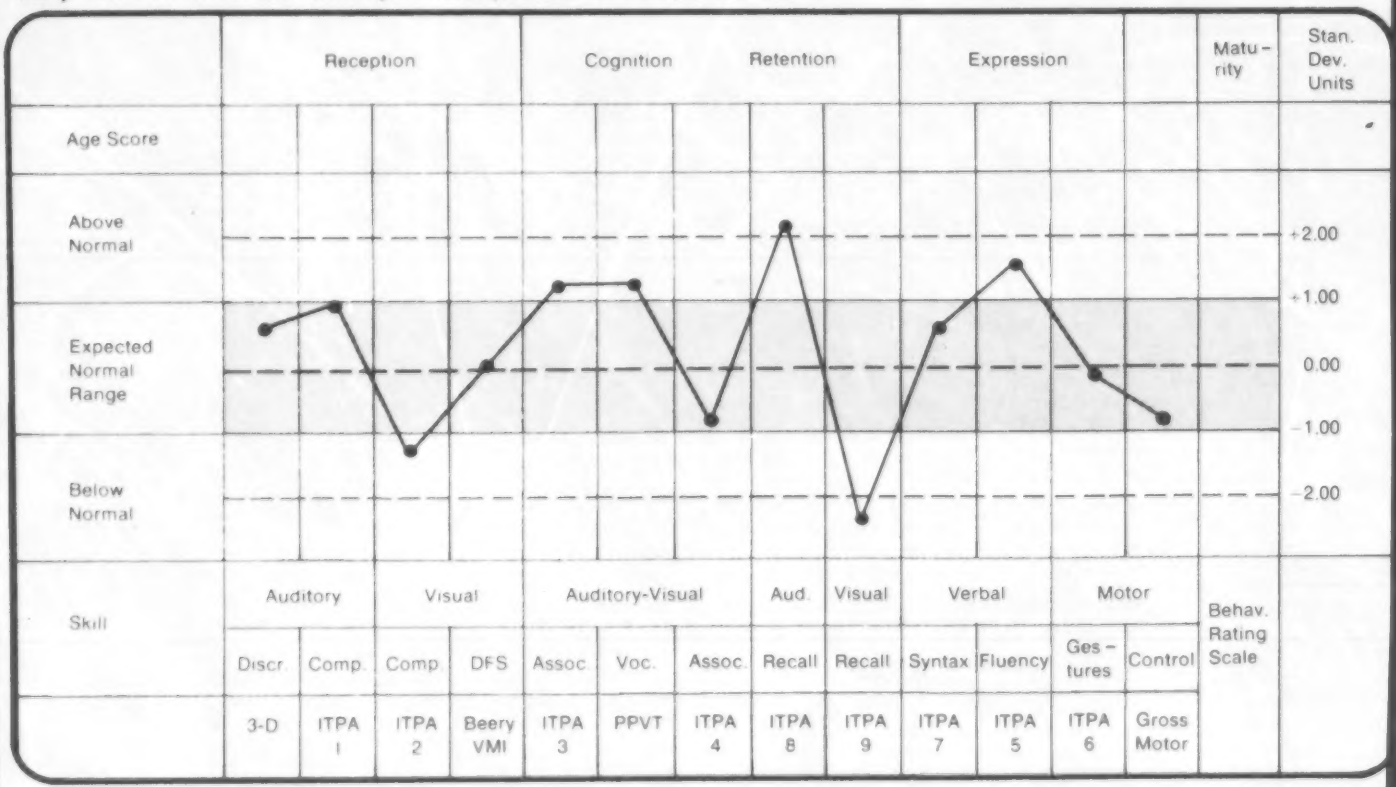
The following are examples of types of activities that are planned for children whose profiles follow the visual pattern illustrated below. The material is grouped into several categories: recognition of objects from pictures, matching, discrimination, memory, comprehension and interpretation, and perception of space.

Recognition of objects from seeing pictures of the object is the most gross of the visual perception skills. Children can learn to match a three-dimensional object with a black and white picture of the object, with the silhouette or a segment of the silhouette of the object, and/or with a picture of one part of the object. Locally fabricated kits and also segments of the Peabody Language Kit are used to develop this skill.

Various types of matching activities are used throughout the Kindergarten program in working with several skills areas. In perceptual matching, children learn to match one picture or shape to another, a three-dimensional object to a two-dimensional object. Pegboard and Light-Brite activities are suitable for this skill.

Visual discrimination involves making observations of objects or forms based on external form, relative size, position, internal detail, color, texture, and a number of other items. Children compare size of themselves to their classmates, discriminate an unlike pattern of the flannel board from two like ones, look through

profile
early education test battery: example of visual pattern



catalogues to find all things red or another given color.

Visual memory instruction helps children retain an image presented for study and then removed. Games such as "Concentration" and "Treasure Tray," in which a child sees a tray of objects and tries to remember what was on it after the tray is covered, and games in which the visual stimulus is presented, the child closes his eyes, the stimulus is rearranged, and the child recalls what is now different about the stimulus are activities that train the visual memory.

Comprehension and interpretation involve grasping a visual stimulus and responding to it, sensing the emotions and motives, organizing ideas and generalizing. There are several applicable activities. Giving a child a picture and having him give a description of it is one. Another is giving a child a picture involving action and having him tell a story about it. A third activity is describing something or someone in the room and having a child guess who or what you are describing.

Perception of space requires children to perceive the relationship of themselves to two or more objects and the relationship of the objects to each other. Worksheets are developed depicting "farthest" and "nearest," "over" and "under," etc. Children follow directions to "put the rock under (beside, to the right of, etc.) the tree."

class activities inventory: visual skills

(Used with permission of the author, Mrs. Jeanne Prentice)

	Age	(Child's Name)	(Child's Name)	(Child's Name)
Points to object named in book	1½			
Names action shown in picture	3			
Fits forms into form board	3			
Names three objects in picture	3			
Visually matches 6 or 10 basic geometric outlines	3½			
Sorts 20 buttons of same shape according to 20 colors	4			
Points to picture (as animal) matching one shown	3½			
Points to a missing part of familiar item	3½			
Recognizes same or different	4			
Responds to picture with description	4½			
Names colors	5			
Assembles simple picture puzzles (2-6 pieces)	5			
Finishes simple incomplete designs	5			
Copies simple dot-to-dot patterns	5-6			
Visual discrimination sequence: external form, relative size or number of items	5-6			

some activities planned for language development

The following are examples of types of activities that are planned for children whose profiles follow the language pattern illustrated on page 86.

Language skills instruction is broken into three components — language patterns, accurate expression of ideas, and creative expression of ideas. Other areas of language activity, those dealing with speech improvement, were not taught in a consciously patterned way at the Experimental Kindergarten.

Language patterns are common ways of expressing oneself, usually automatic if children have had a good model. Activities connected with this skill are designed to teach the proper use of verb tense, as will, would; see, saw, have seen; negatives as in I have, I have not; singulars and plurals, interrogatives, salutations.

1 The teacher asks questions using *would*—"What *would* you do if your ball went into the street and a car was coming?"
Child must reply with a complete sentence—"I *would* look both ways before I went to get it."

2 The teacher plays games using *see* and *saw* — Looking at a picture with the group and then removing it, the teacher says, "What did you *see*?" Child must begin his reply with "I *saw*. . . ."

3 Teacher and the group choose a category, such as toys.
Child decides he is a toy train.
Group questions him, "Are you a horn?"
Child replies using the negative, "No, I am not a horn."

4 This activity for *come* and *came* also spans the area of memory. The language group examines a box full of small objects. One child leaves the room. Each of the others takes an object and hides it on his person. The missing child comes back and approaches a member of the group who says, "What did you *come* to get?" The searching child must begin by saying, "I *came* to get..."

Some activities help children improve their ability to compare, contrast, categorize, and describe accurately. The activities must help them understand concepts such as the composition of matter, colors, classification.

1 Give each child a picture of an object. Without naming the object, but only by giving its description, category, function, location, and other characteristics, a child tries to enable the rest of the group to guess what his picture is. Many variations are used such as blindfolding the child and having him describe the object while he is using only the sense of feel.

2 For comparison, give the children objects and ask, "Which one would you rather have for your own?" They must reply, "I would rather have____ _____ than _____ because it is (prettier, stronger, etc.) than _____."

3 Use "Show and Tell," which is excellent for accurate description of objects and processes, as the child is encouraged to use adjectives such as hard, soft; rough, smooth; slippery, sticky.

Creative language permeates every phase of the curriculum, as children talk to each other and to the adults. Instruction in creative language skills concentrates on involving the children in storytelling and playacting.

1 Have the children retell and act out stories in the following categories: folk, fanciful, animal, adventure, myth, fable, mother goose, personification, and biography.

2 Have the children make up new endings to these or other tales.

3 Have the children make up stories to be told with flannel pieces, puppets, or stick figures.

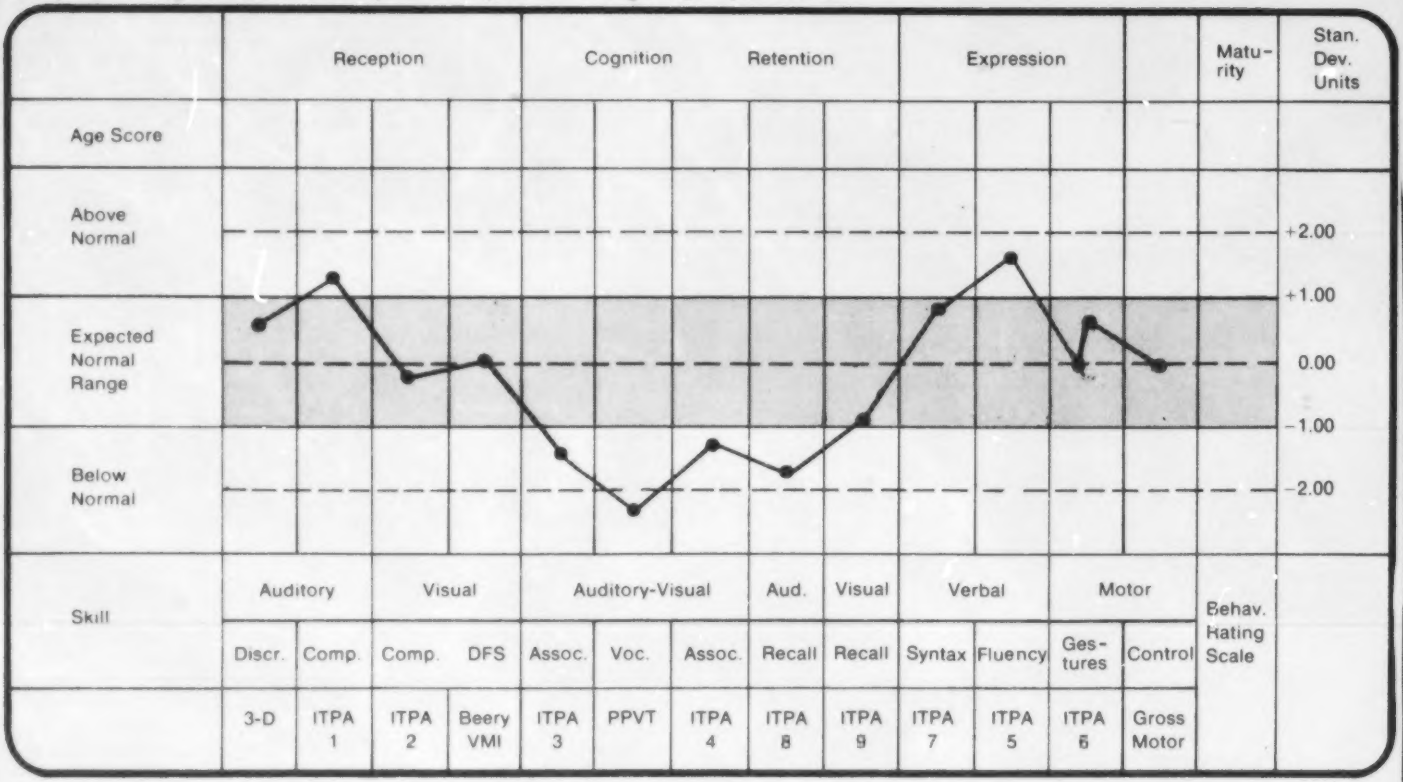
The Kindergarten test profile in combination with teacher judgment was used to place all children in reading groups. During the first two months of each school year, the teaching staff used Peabody Language Kit lessons, Language Lotto, and activities suggested in the *Greater Cleveland Reading Program* to help determine academic ability groupings. By mid-October, every child was working in one of two reading groups. This same grouping was used to present math lessons, using the Nuffield Mathematics Program, Mathex, *Encyclopaedia Britannica*, and Cuisenaire rods. The Kindergarten program also covered cardinal and ordinal numbers and sets.

The reading groups were flexible. The children were moved from one group to another as often as the staff saw the need. Some of the children started immediately to work with the i.t.a. program that has been used within the University City School District. Others needed more work in sound discrimination, in metric clapping to enhance rhythm, and in visual

discrimination. They used the *Greater Cleveland Reading Program*. (Toward the end of each year, the children in two of the original groups reached a point of such individuality that each child was working on his own reading tasks independently of every other child.)

Cooperation rather than competition was stressed in all learning groups. In all reading lessons, children were encouraged to sound out symbols for each other within their group. Late in each year, each child was assigned a reading buddy. The reading buddies used each other as resources, coming to the adult only as a last resort. Children were encouraged to group Educubes so that two children could sit together, or, if playing a game with small pieces, four children could gather around one central Educube.

profile
early education test battery: example of language pattern



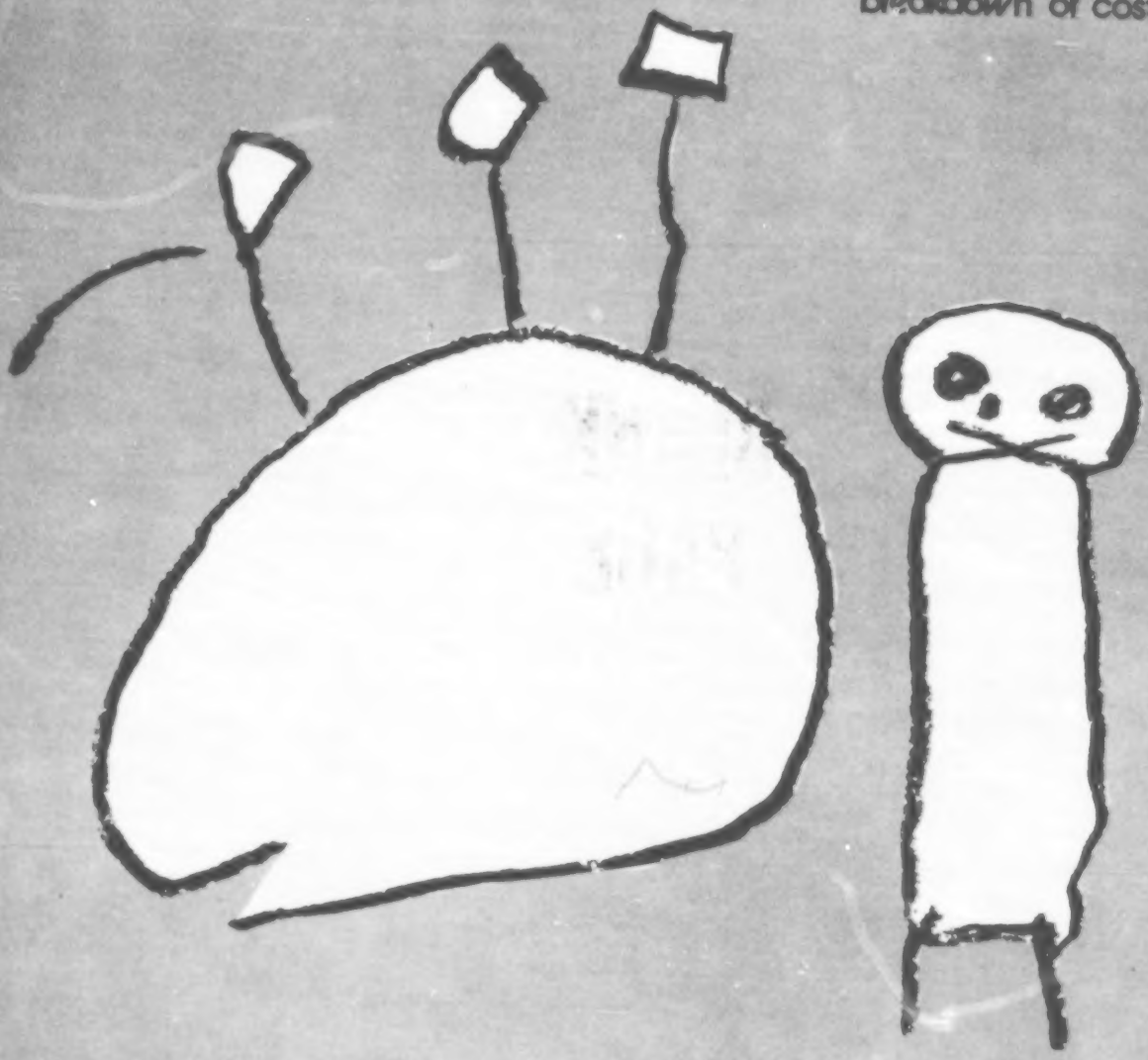
class activities inventory: concept development

(Used with permission of author Mrs. Jeanne Prentice)

	Age	(Child's Name)																					
Names familiar objects	2																						
Describes objects by use	2½																						
Understands Prepositions (in, under)	2½																						
Names action word for agent	3																						
Labels own drawing	3																						
Understands "bigger," "longer"	3½																						
Understands "heavier," "more"	4																						
Defines in descriptive terms	4-5																						
Completes opposite analogies	4																						
Points to "prettier"	4½																						
Asks meaning of words	5																						
Names pennies, nickle, dime	5																						
Defines object by category	5 +																						
Names circle, square, cross	5 +																						
Tell how things are "different"	6																						

appendix b:

breakdown of costs



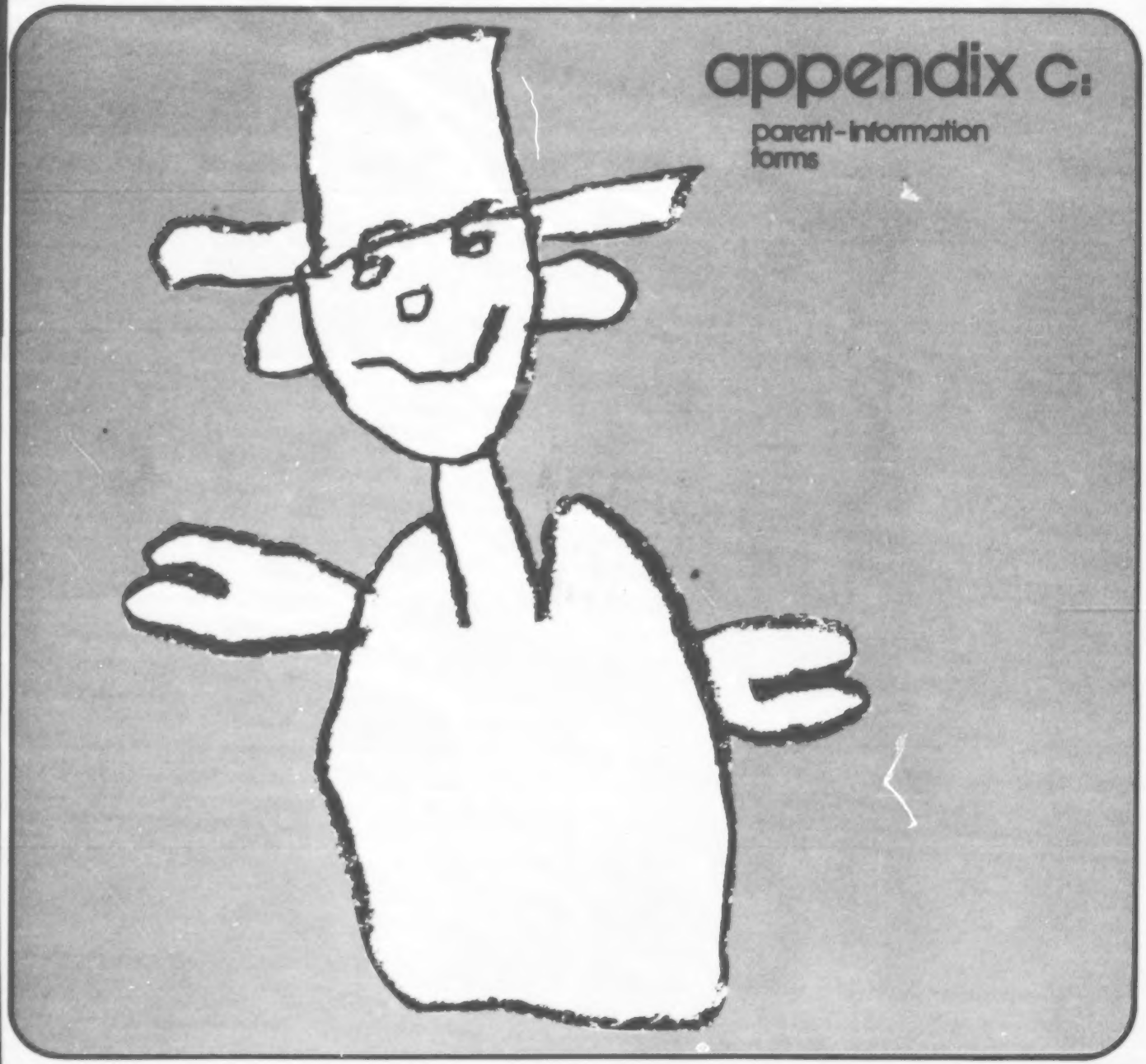
furnishings, alterations to experimental kindergarten room, and curriculum materials purchased

Storage shelves	$ 95.00
Tables (4 @ $35 each)	14.00
Educubes (30 @ $8 each)	240.00
Learning Wall	180.00
Fluorescent light fixtures and electrical outlets	240.00
Indoor-outdoor carpeting	360.00
Cabinet sink	200.00*
Painting of room	250.00*
Labor	225.00
Curriculum materials	663.00**
TOTAL	$2,467.00

*Installation of the sink and painting were done by the school's maintenance staff, and these figures are only approximations of the cost of time and materials.

**Curriculum Materials Purchased:

Aids to reading (i.t.a. materials, *GREATER CLEVELAND READING PROGRAM, READING FOR LITTLE ONES*, Scholastic Library of 40 Basic Books, *LITTLE OWL* books, Educational Research Council materials)	$ 68.00
Math materials (counting blocks, fulcrum balance, Cuisenaire rods, etc.)	75.00
Visual training materials (design blocks and tiles, kaleidoscope)	30.00
Materials for dramatic play (unitized trucks, trains, boats, people, etc.)	145.00
Easel Listening Games by Mary Merwin (Scranton, Pa.: Acadia Press)	18.00
Music for Children (Orff), Doreen Hall edition, and musical instruments	90.00
Threshold to Music, The First Three Years (Kodaly) by Mary Helen Richards (New York: Harper and Row)	15.00
Inlay puzzles	45.00
Konnecto building blocks (@ $1 per unit)	60.00
Wooden unit blocks	54.00
Lotto games	3.00
Teacher aids (charts, transparencies, magnetic board)	60.00
	$ 663.00


appendix c:
parent-information
forms

about mothers

Please check or fill in where appropriate

Name:

☐ I am employed all day every day and I cannot come to the classroom even occasionally.

☐ I am employed all day every day but if you need me three or four times during the year for an hour or two I can shake free.

☐ I have on occasional day free. Usually it is (day of week) _____.

☐ I have free time but I don't care to come to the classroom.

☐ I would be interested in coming into the classroom regularly once a week.

I want to: work with a small group ☐ work with one child ☐ do housekeeping chores only: (mix paint, clean, etc.) ☐

My work might be interesting for children to hear about ☐ visit ☐

☐ I cannot get out, but I will bake for parties or make phone calls from home, or _____.

Briefly, here is the situation:

I think the children might learn (from my work):

I know about and would share my information about:

music (I play the _____)
art (I paint, etc. _____)
house plants
vegetable gardening

You missed me. My hobby is _____

about fathers

Please check or fill in where appropriate

Name

☐ I am employed all day every day and I cannot come to the classroom even occasionally.

☐ I am employed all day every day but if you need me three or four times during the year for an hour or two I can shake free.

☐ I have an occasional day free. Usually it is (day of week)_____

☐ I have free time but I don't care to come to the classroom.

If I do come into the class, I want to observe ☐ work with a small group ☐ talk formally to all the children at once ☐

My work might be interesting for the children to hear about ☐ visit ☐

Briefly, here is the situation:

I think the children might learn (from my work):

I know about and would share my information about:

art	animals	photography	stamps
carpentry	boating	farming	sports (which)_____
cars	astronomy	rocks and minerals	music (I play the_____

You missed me. My hobby is_____

I can supply small amounts of the following scrap materials:

wood
paper

nails, screws, etc.
you missed_____ which I can supply